

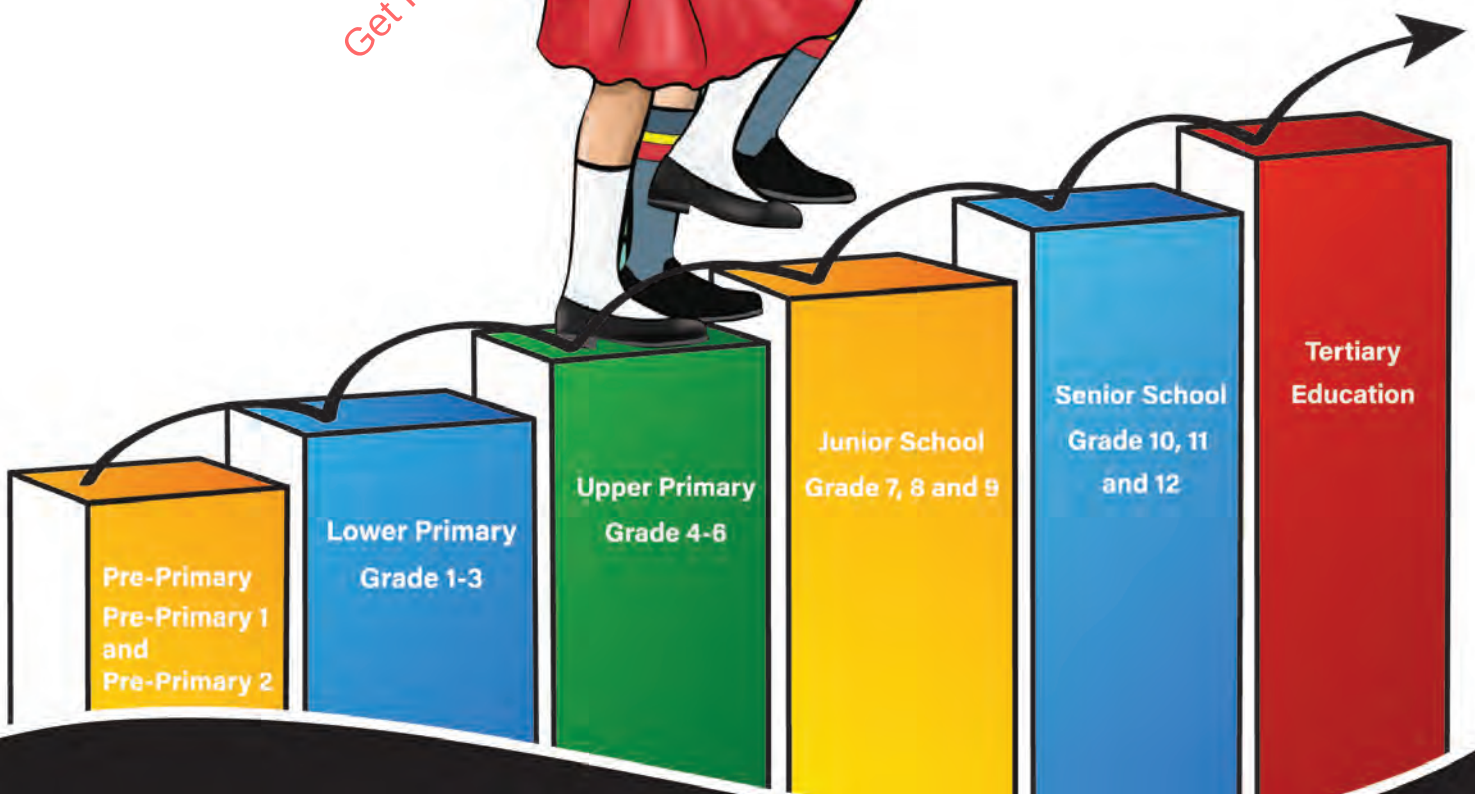


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THE KENYA NATIONAL
EXAMINATIONS COUNCIL

KENYA PRIMARY SCHOOL EDUCATION ASSESSMENT (KPSEA) NATIONAL REPORT, 2023



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KENYA PRIMARY SCHOOL EDUCATION ASSESSMENT (KPSEA)

NATIONAL REPORT, 2023.

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Foreword

The Kenya National Examinations Council Act 2012 mandates the council to conduct academic, technical and national examinations and carry out research on educational assessment.

Assessment plays an important role in the learning process since what is taught and how learning takes place greatly depends on how teachers and learners think assessment will be conducted. Assessments also provide important data on what knowledge, skills and attitudes learners have acquired, how well they have learned them, and the challenges they encountered in the process of learning.

The 2023 Kenya Primary School Education Assessment (KPSEA) sought to establish the learning outcomes at upper primary school level. It also sought to assess pupils' levels of acquisition of core competencies and values. This report provides a detailed analysis of Grade 6 learners' performance in each subject. It also gives the classroom teachers relevant information about learning gaps noted at the end of the primary tier. The report further provides recommendations on how teachers can tweak their teaching strategies to enhance teaching and learning to improve learning outcomes. Further, it informs stakeholders in education of possible interventions that can improve learning outcomes at the primary school level.

I sincerely hope that parents and other stakeholders in education will find this report a useful point of reference as they participate in their children's learning. Additionally, education stakeholders can utilise the recommendations of the report to formulate appropriate intervention strategies aimed at improving the quality of education in Kenya. Specific policy level recommendations to the MoE agencies (TSC, KICD, KNEC) have been provided to enhance teaching and learning at upper primary.

Prof. Julius Nyabundi, OGW,
Council Chairman,
Kenya National Examinations Council.

Acknowledgements

The Kenya National Examinations Council administered the 2023 Kenya Primary School Education Assessment (KPSEA) from 27th October to 1st November 2023 across the registered assessment centres in the country. The main purpose of KPSEA is to establish the levels of achievement among Grade 6 learners in English, Mathematics, Kiswahili, Integrated Science, and Creative Arts and Social Studies. This national report on the 2023 KPSEA is an analysis of the learners' performance. It is intended to guide teachers and education stakeholders on the quality of education accessed at primary school for possible interventions.

Different stakeholders have contributed immensely to the successful compilation of this report. I would therefore like to recognise the role played by the following professionals in the development of the 2023 KPSEA report: Prof. Raphael Nyonje (UoN), Dr. Peter Changilwa (USIU), Dr. Beth Wambugu (MU). From KNEC were: Andrew Francis Otieno, Khadija Iman, Anne Ngatia, Jane Kashu, Epha Ngota, Emmy Mugailwa, Kennedy Abuje, Francis Mutua, Musa Kipchirchir, Doreen Kawira, Patricia Omunyang'oli, Charles Karanja, Francis Muema, Doreen Olunga, Franklin Etyang', Bernard Muhalia, Genevieve A. K'Opiyo, Lucy Rono, Asman Amaunda, Joseph Nyaga, George Gathungu, Dickens Ogony, Newton Murani, George Were, Esther Mwarania, Hassan Omar, Rosemary Njiru, Dr. Tobias Owiti, Phillip Kimanthi, Enock Wanyama and Yusuf A. Mumin, Caroline Gichuru, Euphemia Kaloki, Josephine Pepela, Maryam Swaleh, Mwendu John, Nelson Mugallah, Isika Musili and Herman Omondi. My gratitude goes to Johnstone K. Korir, Emily Akiri and Amos Kirumba Karori (TSC-Field officers) for their support in shaping the contexts of learning. My appreciation also goes to Zipporah Ndung'u and Stephen Mabwa for providing technical support in graphic design.

It is my sincere hope that this national report will provide insights into improving learner achievement at the end of primary schooling and inform education quality dialogues among relevant stakeholders in the education sector.

Dr. David Njengere, MBS,
Chief Executive Officer,
Kenya National Examinations Council

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List of Acronyms and Abbreviations

AIDS	Acquired Immunodeficiency Disease Syndrome
ASAL	Arid and Semi-Arid Lands
BECF	Basic Education Curriculum Framework
CA	Classroom Assessment
CBA	Competency Based Assessment
CBC	Competency Based Curriculum
COVID-19	Corona Virus Disease 2019
CRE	Christian Religious Education
CSL	Community Service Learning
CTS	Career and Technology Studies
D-index	Difficulty index
ESD	Education for Sustainable Development
F-index	Facility index
GCE	Global Citizenship Education
HIV	Human Immunodeficiency Virus
HRE	Hindu Religious Education
ICT	Information and Communication Technology
ILR	Individual Learner Report
IRE	Islamic Religious Education
JS	Junior School
KCPE	Kenya Certificate of Primary Education
KICD	Kenya Institute of Curriculum Development
KISE	Kenya Institute of Special Education
KNEC	Kenya National Examinations Council
KPSEA	Kenya Primary School Education Assessment
KSL	Kenyan Sign Language
KU	Kenyatta University

LSE	Life Skills Education
LSP	Learner Support Programmes
LSV	Life Skills and Values
MCQ	Multiple Choice Questions
MoE	Ministry of Education
MLP	Monitoring Learner Progress
MU	Moi University
NASMLA	National Assessment System for Monitoring Learner Achievement
NCPWD	National Council for Persons with Disabilities
NFP	Non-Formal Programmes
P.b.u.h	Peace be upon him
PCI	Pertinent and Contemporary Issue
PEE	Parental Empowerment and Engagement
PHE	Physical and Health Education
RE	Religious Education
SEACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SBA	School Based Assessment
SDG	Sustainable Development Goal
SNE	Special Needs Education
SS	Senior School
SSR	School Specific Report
STEM	Science, Technology, Engineering and Mathematics
SYR	School Year Report
TSC	Teachers Service Commission
UoN	University of Nairobi
USA	United States of America
USIU	United States International University
VbE	Value Based Education

Definitions of Key Terms

Assistive Technologies	Any device, software, or equipment that helps people work around their challenges. Some examples of assistive technology are text-to-speech and word prediction. Assistive technology includes low-tech tools like pencil grips.
Approaching Expectation	The learner displays the knowledge, skills and attitudes/values assessed some of the time.
Below Expectation	The learner attempts to display the knowledge, skills and attitudes/values assessed and does so with assistance.
Competencies	Combinations of attitudes, skills and knowledge that learners develop and apply for successful learning, living and working. Competency is described in the curriculum as the ability to apply appropriate attitude, knowledge, and skills to successfully perform a function’.
Curriculum	This is all the organised experiences that schools provide to help children learn and develop. It includes the subjects taught, the content, the school environment and other activities that take place outside of the classroom.
Disability	A physical, sensory, mental, or other impairment including any visual, hearing, learning or physical incapability which impacts adversely on social, economic, or environmental participation.
Discrimination	Any direct or indirect distinction, exclusion, or restriction based on disability which has the purpose or effect of nullifying the recognition, enjoyment, or exercise on an equal basis with other people.
Exceeding Expectation	The learner consistently and with a very high level of accuracy displays the knowledge, skills and attitudes/values assessed.
Impairment	The state or fact of being impaired, especially in a specified faculty.
Inclusion	This refers to changing of attitudes and environments to meet the diverse needs to facilitate participation of persons with special needs and disabilities on equal basis with others in society.
Item	Includes the stem, question and the options.

Definitions of Key Terms

Learner with disability	Refers to a learner registered with the National Council for Persons with Disabilities (NCPWD) as a person with disability and includes those who have long term physical, mental, intellectual, emotional, or sensory impairment.
Learning gaps	This is a variation between what a learner has learned and what a learner was expected to learn.
Learning areas	Refers to the grouping of related subjects with an aim of integrating students' learning. The new curriculum recognises learning areas as opposed to traditional subjects, learning in the new curriculum has specified broad strands that will be covered in a learning area such as writing, reading, listening, and speaking in English learning area.
Meeting Expectation	The learner displays the knowledge, skills and attitudes/values assessed in most cases.
School Based Assessment	These are formative assessments set by KNEC, administered and marked by teachers at school level and the scores uploaded onto the CBA portal. It is a system for collecting information on learners' learning status for the purpose of planning improvement programs in the performance of learners.
Pathway	A pathway is an intentional educational structure within a school system for an academic course of study. Age based pathway for learners without disabilities and learners with sensory and physical disabilities who follow the curriculum with adaptations and modifications. Learners with severe disabilities who are not able to follow the regular curriculum follow the Stage based pathway .
Proxy	Authority to represent someone/something else.
Question	Word or an expression that elicits a response.

Executive Summary

The Kenya National Examinations Council administered the 2023 Kenya Primary School Education Assessment (KPSEA) from 27th October to 1st November 2023 to establish levels of achievement among Grade 6 learners in English, Mathematics, Kiswahili / Kenyan Sign Language, Integrated Science, and Creative Arts and Social Studies. The main purpose of KPSEA is to inform education stakeholders on the learning gaps noted and suggest interventions that could ensure learners post better learning outcomes at the end of primary schooling.

Assessment centres and learner registration

The successful administration of any summative assessment like KPSEA relies on the timely registration of the learners to inform subsequent processes effectively and efficiently. The aspects that were noted on learner registration are presented in Chapter One. For instance, in 2023, the assessment centres offering learners for KPSEA were 32,623 compared to 32,555 in 2022. Some of the counties that registered an increase in the number of assessment centres include: Mombasa 18 (0.06%), Nairobi 14 (0.04%), and Nakuru 14 (0.04%). A significant decrease in assessment centres was observed in Meru 19(0.06%), Homa Bay 15 (0.05%) and Kisii 11 (0.03%). Reduction in the number of centres could be a pointer to factors that contribute to learners accessing quality education and transitioning from one level to another.

Generally, counties in Arid and Semi-Arid Lands (ASAL) registered lower numbers of assessment centres compared to those in non-ASAL areas. For instance, Lamu, Isiolo and Samburu registered lower numbers of assessment centres at 122 (0.37%), 143 (0.44%) and 182 (0.56%) respectively compared to Nairobi, Kitui and Machakos counties that had the highest number of assessment centres at 2,017 (6.18%), 1,520 (4.65%) and 1,205 (3.69%) respectively.

A total of 1,281,210 learners sat KPSEA in 2023. It was observed that 5 counties had notably higher learner registration; these were Nairobi (90,798), Kakamega (65,582), Kilifi (59,661), Nakuru (59,091), and Bungoma (56,309). Lower learner registration was recorded in Isiolo (4,521), Lamu (4,707) Samburu (6,101), Wajir (7,403), Tana River (7,521), Marsabit (7,646), and Mandera (8,651) counties.

Of concern was the significant number of learners (59,272) who registered for the first time while sitting the 2023 KPSEA summative assessment pointing to the lack of compliance with the stipulated guidelines in the Competency Based Assessment Framework (CBAF) by assessment centres. The guidelines indicate to schools how to register all learners at Grade 3 for effective formative and summative assessments. Such late registration during the administration of the summative assessment has implications on the management of KPSEA, more so where the tracking of learners' performance contributes to future decision making processes.

Tracking learner enrolment

The analysis of the 2023 Grade 6 cohort's transition and enrolment trends from 2020 to 2023 shows that out of a total of 1,325,628 learners who were registered while in Grade 3 in 2020, a total of 1,281,210 sat KPSEA in 2023, representing completion rate of 96.65%. Further analysis revealed that 95.19%, 96.32% and 93.67% of the learners in Grades 3, 4, and 5, respectively sat the School Based Assessments (SBAs). This implies that a significant number of learners in the 2023 KPSEA cohort did not undertake the formative (SBAs) as they progressed through the respective grades, a factor pointing to lack of compliance with the assessment policy guidelines in some schools as stipulated in the Competency Based Assessment Framework (CBAF).

Learners' Gender

At the end of primary schooling, 657,893 boys (51.35 %) and 623,317 girls (48.65%) registered for KPSEA in 2023 indicating gender parity in primary school enrollment. In 2023, the proportion of boys who registered for the assessment was higher than that of girls by 2.70% compared to 3.48% as reported in 2022. Kilifi County had a reduced gender gap of 0.02% in enrolment between boys and girls. In West Pokot, Marsabit and Migori counties, boys were slightly more than girls by 0.14%, 0.47% and 1.08% respectively. Commendably, West Pokot continues to register a steady progress towards reducing the gender gap of 0.25% in 2022 to 0.14% in 2023.

Learners with disabilities

Learners with disabilities accessing education in the Age based pathway registered for KPSEA. It was established that out of 3,268 who sat the 2023 KPSEA, 1,467 (44.89%) were learners with physical disabilities followed by 948 (29.01%) learners with hearing impairment. Learners with low vision were 705 (21.57%) while 148 (4.53%) were those with visual impairment. Bungoma, Kiambu and Kisumu were among the counties that registered the highest number of learners with disabilities at 164 (5.02%), 160 (4.90%), and 153 (4.68%) respectively. Counties in ASAL areas such as Lamu, Wajir, and Samburu recorded the lowest registration of learners with disabilities at 2 (0.06%), 16 (0.49%), 18 (0.55%) and 20 (0.61%), respectively.

Of concern were the counties reporting low registration of learners with disabilities. This could be attributed to stigma issues preventing these learners from accessing education, as well as lack of early identification and placement in the correct pathway. Having a timely functional assessment by Educational Assessment and Resource Centres (EARCs) could ensure access, inclusivity, and equity at primary school level.

Learners' age

Kenya offers the Age based pathway with clear guidelines on the grade-appropriate-ages communicated in various policy documents. Nationally, an analysis of the average ages of the learners who registered for 2023 KPSEA was done. A total of 757,924 (59.16%) were age-appropriate (11 to 12 years) learners

for Grade 6 in 2023 compared to 619,071 (49.38%) learners who sat in 2022. This was an improvement of 9.77% towards achieving age-appropriate-grade-attendance in primary schooling.

There was a notable reduction in the number of overage learners (those over 12 years old) from 592,172 (47.24%) who sat the 2022 KPSEA to 261,588 (20.42%) learners in 2023. Counties that contributed to the 20.42 % national proportion of overage learners at Grade 6 included: Garissa, Kwale, Kilifi, Mandera and Tana River at 63.00%, 53.02%, 51.21%, 49.86% and 43.28% respectively. This implies that there are factors that may be contributing to the prevalence of over age learners in various grades that may require investigating and addressing, as studies show that the age of learners has a bearing on the learners' achievement (Çelikkol, 2023; Olalowo, 2020).

Learner performance

Learner performance is presented in Chapter Two, it was established that learner performance on most subjects recorded an above average mean. This implies that the overall performance in all subjects offered in the 2023 KPSEA fell within the expected range of scores, with the exception of Kenyan Sign Language (KSL) where learners achieved slightly below the average mean performance.

Notably, Agriculture, Home Science and Music had low standard deviations (2.85, 2.88 and 3.20 respectively). English (9.06), Mathematics (8.36) and Kiswahili (7.63) had the highest standard deviations implying a greater variability in the learner performance outcomes that can effectively inform policy interventions for better learning outcomes.

On gender, performance of boys and girls was comparable in all subjects. For instance, in Mathematics, boys registered a mean of 18.56 while girls attained a mean of 18.68. In Agriculture, the mean of boys was 5.65 while girls registered a mean of 5.74. In the following seven (7) out of the fourteen (14) subjects sat, most learners were exceeding or meeting expectation in: English (61.36%); Kiswahili (66.90%); Physical and Health Education (58.39%); Social Studies (62.80%); Art and Craft (61.98%); Christian Religious Education (66.88%); and Islamic Religious Education (58.22%). Learners' performance in the following two subjects was at approaching or below expectation: Kenyan Sign language (77.21%); and Hindu Religious Education (57.57%). This indicates the need to enhance teaching and learning resources, retooling teachers for better understanding and the interpretation and implementation of curriculum designs, and to investigate further causes of this performance trend. Having strong foundational learning in these subjects will ensure that learners exiting at the end of primary schooling have better chances of understanding subsequent content in the subject. Subject specific interventions could be considered to ensure that the subjects with learners performing at approaching or below expectation pose better learning outcomes.

Laying foundation for acquisition of core competencies and values

Concerning assessment of the acquisition of core competencies, core values, and pertinent and contemporary issues in the 2023 KPSEA, proxy test items were analysed for proxy evidence on the

foundational building blocks of acquiring the core competencies among learners. Chapter Three details the analysis and findings per Core Competency as well as the Core Values and PCIs.

All learners performed at Approaching Expectation based on the proxy evidence in all core competencies. This indicates that the foundation for acquiring the core competencies is being laid and given age-appropriate tasks the learners are able to display the basic behaviour that portrays the 7 core competencies as envisaged in the BECF.

Regarding the foundational acquisition of core values, most of the learners performed at Meeting Expectation on proxy questions that tested the values of Love and Respect. This was commendable and should be sustained by the teaching, learning and assessment experiences. An analysis on the proxy items that tested the core values of Responsibility, Unity, Integrity, and Patriotism revealed that most learners were performing at Approaching Expectation in the foundational acquisition of these values.

Of concern was the proportion of learners performing at Below Expectation when given questions on in the values of Social Justice.

The assessment of the PCIs established that a majority of the learners were performing at Meeting Expectation on proxy items that tested on Health Education Life Skills and Values Education. Learner performance on proxy items testing Global Citizenship, Education for Sustainable Development, Learner Support Programmes and Community Service Learning indicates that all the learners were performing at Approaching Expectation.

Recommendations

The 2023 KPSEA Report draws the following recommendations.

Ministry of Education

The Ministry of Education should ensure that:

- a) schools comply with the formative and summative assessment guidelines for better institutionalisation of CBA.
- b) quality assurance visits are conducted to ascertain the factors that could be leading to the closure of some schools/centres and their impacts on learners' completion of primary schooling and transition, and ensure the gains made in 100% transition at the end of primary schooling are sustained.
- c) Early Assessment and Resource Centres (EARCs) are well quipped and staffed and easily accessible for effective and timely functional assessment and educational placement of learners with disabilities in educational programmes most suited for nurturing their potential
- d) policy interventions that promote narrowing the gender gap in access to primary education; age-appropriate school entry or age-appropriate-grade-attendance are implemented, especially in counties with greater disparities.

- e) provision of teaching and learning resources such as descant recorders to learners to enable them to develop the required practical performance skills in Music and provision of adequate visual KSL resource materials such as videos, picture stimuli in schools to enable learners to relate graphics with names/words to help them build KSL vocabulary.
- f) schools have well established and equipped laboratories for teaching Home Science and performing Science experiments and studios for Art and Craft activities.
- g) teacher trainees are taken through practical learning experiences during their pre-service training so that they gain in-depth knowledge on content and pedagogy to enable them plan and effectively teach the foundational skills for each subject at primary schooling.
- h) CEMASTEIA prioritises school-based teacher support for improving foundational learning of STEM subjects at primary school.
- i) monitoring of learning is frequent to ensure that factors affecting teaching and learning in lower and upper primary levels are investigated and appropriate interventions put in place.

Teachers Service Commission

The Teachers Service Commission plays a crucial role in ensuring the implementation of the curriculum. In this regard, the commission should:

- a) capacity build teachers on methods of instruction and assessment that are authentic, practical and in context with acquisition and application of skills and competences.
- b) capacity build teachers on how to effectively develop in learners the competencies, values and PCIs to improve their performance in future assessments.
- c) retool teachers with greater emphasis on the use of learning experiences in the curriculum design for learner conceptualisation of curriculum content.
- d) incorporate the subject specific learning gaps in the assessment tools for Teacher Professional Development process to identify capacity gaps for School Based Teacher Support programmes and address them.
- e) ensure appropriate teacher establishment in schools especially for the teaching of Science and Technology, Art and Craft, Music, Home Science and HRE.

Kenya Institute of Curriculum Development

The Kenya Institute of Curriculum Development should:

- a) collaborate with TSC to strengthen the capacity of teachers to understand and interpret subject-specific learning experiences as outlined in the curriculum design.
- b) make use of the noted learning gaps in each subject and develop teaching and learning materials for sharing via radio lessons, Edu Channel, and other content access modes available.

Teachers and head teachers

Teachers play a key role in facilitating curriculum implementation. They should therefore:

- a) use teaching strategies and assessment modes that emphasise the application of knowledge, skills attitudes and values to be acquired by the learners.
- b) analyse school specific reports for learning gaps and come up with more subject specific strategies/ learning experiences to improve on learner content conceptualisation, teaching and assessment.
- c) expose learners to a wide range of contexts such as use of visual aids, print and digital media to ensure acquisition of aspects of reading for comprehension and mastery of content.
- d) link various content areas across different strands and subjects and facilitate learners to realise the inter relationship.
- e) diversify modes of content delivery and assessment that focus on real-life tasks that learners can identify with. For instance, in Social Studies, diagrams should be used to illustrate relief features for better mastery of concepts.
- f) adopt a practical approach by giving learners opportunities to perform tasks more.
- g) involve learners in vocabulary building tasks that create opportunities for using expressive and receptive skills in KSL directly or in pictorial representation, interpreting spatial information and modelling accurate ways of signing words.
- h) ensure that learners are registered at Grade 3 for effective formative and summative assessment in line with the CBA Framework and keep all appropriate progress records.

Parents/Guardians

Parental involvement is pivotal in a learner's progress. The parents/guardians should therefore: ensure enrolment of children for schooling in line with the school entry age policy.

- a) provide a conducive learning environment for the learners and foster in them positive attitude towards learning.
- b) monitor the learner's progress and motivate them as they undertake their tasks as this helps nurture the learner's potential.
- c) support learning by providing the required materials to the learners during teaching, learning and assessment.
- d) create a rich language environment at home for regular learners and learners with hearing impairment.
- e) instil values in the learners right from home and compliment the acquisition of core competencies among the learners.

Conclusion

The 2023 KPSEA Report aims at informing the various education stakeholder as they come up with policy interventions that would ensure the concerted efforts are expended to increase the proportion of learners at end of primary schooling likely to transition to Junior School with the foundational skills that will help sustain their future learning of concepts. This Report shows that aspects of learner registration for the formative and summative assessment could be made more efficient to ensure no learner is left behind or disadvantaged. The performance points to the need for teaching and learning resources, teacher retooling, and adoption of subject specific interventions to ensure foundational learning is improved in all subjects at primary school level.

Chapter 1

1.0 Introduction

1.1 General Information on the Kenya National Examinations Council

The Kenya National Examinations Council (KNEC), also referred to as The Council, is a State corporation established in 1980 by an Act of Parliament; namely, the Kenya National Examinations Council Act Chapter 225A of (1980). This Act was repealed in 2012 and replaced with the Kenya National Examinations Council Act No. 29 of 2012.

1.1.1 Vision Statement

Transforming lives through quality assessment and credible certification.

1.1.2 Mission Statement

To assess abilities and certify learner achievements in conformity with global standards.

1.2 The Functions of the Council

1.2.1 KNEC core functions

According to Section 10 of the Kenya National Examinations Council Act No. 29 of 2012, the core functions of the Council are to:

- a) Set and maintain examination standards.
- b) Conduct public academic, technical and other national examinations within Kenya at basic and tertiary levels.
- c) Award certificates or diplomas to candidates in such examinations and confirm authenticity of certificates or diplomas issued by the Council upon request by the government, public institutions, learning institutions, employers, and other interested parties.
- d) Undertake research on educational assessment.

- e) Advise any public institution on the development and use of any system of assessment when requested to do so, and in accordance with such terms and conditions as shall be mutually agreed between the Council and the public institution.
- f) Promote the international recognition of qualifications conferred by the Council.
- g) Advise the Government on any policy decision that is relevant to or has implications on the functions of the Council or the administration of examinations in Kenya.
- h) Do anything incidental or conducive to the performance of any of the preceding functions.

1.2.2 Core Values

The KNEC core values are:

- a) **Professionalism:** Our work is rooted in accurate data, critical skills, tested knowledge and collaborative thinking.
- b) **Integrity:** We are trusted to efficiently use our resources to deliver our promise ethically with utmost honesty.

- c) **Team Spirit:** We embrace collaboration and team up with strategic partners in service delivery.
- d) **Innovativeness:** We are committed to creativity and aspire to embrace new ways and ideas of service delivery.
- e) **Accountability:** We embrace reliability and personal responsibility for decisions and actions taken in order to honour our commitments to our customers.

1.3 The parameters of assessment

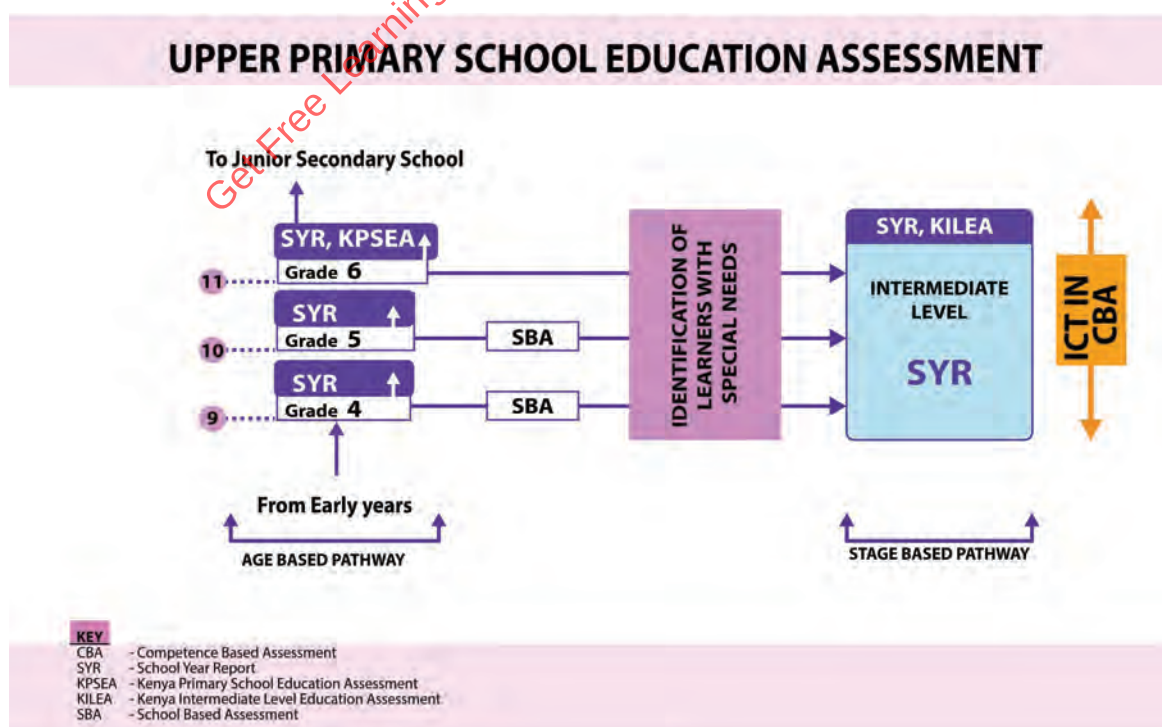
Assessment refers to the process of gathering evidence on what learners know, understand, and can do in a systematic way to evaluate their learning and to make decisions on the education processes. The Kenya Primary School Education Assessment (KPSEA) is a summative assessment that is administered at the end of upper primary (Grade 6).

It is guided by four parameters; namely, the purpose of assessment, the mode of assessment, the assessment tools and reporting on the assessment outcomes. Learner progression between grades in the Age based pathway is guided by the conduct of formative assessment and the provision of the School Year Report (SYR). Assessment at upper primary school level is organised as illustrated in figure 1.

1.3.1 The purpose of KPSEA

The purpose of any assessment varies depending on the level at which the assessment is being offered. KPSEA is administered to find out the level of mastery of competencies among learners in the subjects assessed; to inform on the transition of learners to Junior School (JS); and to inform education stakeholders on possible policy interventions for upper primary.

Figure 1: Assessment and reporting at upper primary school level



Source: KNEC 2023

The specific purpose of assessment at upper primary school includes, :

- a) providing feedback on acquisition of competencies to learners, teacher, parents/guardians, and other relevant stakeholders;
- b) informing policy makers and curriculum developers on areas to target for appropriate intervention;
- c) helping the teacher /facilitators to improve on instructional strategies and approaches based on learning gaps noted;
- d) highlighting gaps in the provision of resources that support implementation of curriculum;
- e) informing parents/guardians on learners' educational needs for support/intervention;
- f) encouraging learners to develop self and peer assessment skills;
- g) informing on the interventions as learners transition from upper primary to Junior School;
- h) establishing the level of acquisition of the competencies in the subjects assessed and monitoring learner progress.

1.3.2 Mode of assessment

Assessment at this level is both formative and summative. The assessment process starts at Grade 4 with classroom assessments conducted by teachers guided by the curriculum designs on activities to carry out during instruction. This helps in determining the level of achievement of the learning outcomes and remedial measures required. KNEC reinforces the classroom assessment by providing standardised tools for School Based Assessment (SBA) at Grade

4 and 5 in all the subjects. During School Based Assessment, learners are accorded the opportunity to work individually, in groups and with the support of resource persons, parents and teachers depending on the task to exhibit their understanding of concepts taught.

The 2023 KPSEA summative assessment was administered at the end of Grade 6. The assessment at the end of Grade 6 was conducted as guided by the Competency Based Assessment Framework (CBAF) for the Age based pathway which recommends an assessment at the end of upper primary (KNEC, 2023). In addition, the assessment sought to monitor learning of basic skills and competencies that learners were expected to have acquired as per the specific learning outcomes at that level. The assessment also assists in identifying learning gaps in various subjects and provides recommendations to relevant stakeholders for appropriate interventions.

1.3.3 The assessment tools

The formative and summative assessment of the 2023 Grade 6 cohort was conducted using a variety of assessment tools that included: written tests, projects, practical/performance tasks, observation checklists, oral, aural, portfolio assessments, among others. The assessment tools were developed by a panel of professionals comprising Ministry of Education Quality Assurance and Standards Officers, KICD Subject Specialists, KNEC Subject Specialists, university lecturers and practising teachers/teacher trainers. The various assessment tools are used by teachers and educators to gather information about a learner's achievement. The assessment tools used comprised authentic tasks that provided learners with the opportunity to demonstrate their knowledge and skills using real life tasks. Some

of the tasks in the assessment tools embedded questions that checked on the acquisition and development of the Core Competencies, Core Values, and the Pertinent and Contemporary Issues (PCIs).

To enhance credibility, KNEC employed quality controls through the provision of scoring guides, assessment administration guidelines and monitoring the conduct of SBA and summative assessments.

1.3.4 Reporting on assessment outcomes

The SBAs are administered, scored, analysed and resultant reports used to provide feedback to stakeholders. The learners, parents and teachers receive instant feedback when formative assessments such as Classroom Assessments and School Based Assessments are carried out. KNEC has developed an efficient and interactive online portal to support the registration of learners for SBA and summative assessment of KPSEA. Teachers play a crucial role in the conduct of SBA at upper primary and in uploading the learners' assessment outcomes on the Competency Based Assessment (CBA) portal. KNEC has ensured that Individual Learner Reports (ILR) are given to each learner to inform them of their performance as they transition to Junior School. Schools are provided with School Specific Reports (SSR) that highlight the performance of the candidates in each school in each subject, the learning gaps noted and suggested remedies. These SSRs are useful to both the JS teachers receiving the same

cohort of learners and the upper primary teachers who may need to improve the learning outcomes of learners in their respective schools.

1.4 The objective of the 2023 KPSEA Grade 6 national report

The objective of the 2023 KPSEA Grade 6 national report is to give feedback to relevant education stakeholders through the provision of the following:

- a) detailed analysis of learners' performance in each subject assessed;
- b) identified learning gaps noted in each subject assessed;
- c) suggested remedies to teachers, curriculum developers, and curriculum implementation material developers with an aim of improving teaching strategies and consequently improve learning outcomes.

1.5 Administration of KPSEA

Successful field administration of any national assessment relies on the personnel involved. The 2023 KPSEA was administered concurrently with KCPE and therefore the Centre Managers and Supervisors were shared. However, KPSEA stand-alone centres that had more than 30 candidates were considered as independent centres. Where KCPE and KPSEA had a combined candidature of 200 and above, a Deputy Headteacher was involved as a Centre Manager.

Table 1: Personnel engaged during management of 2023 KPSEA

Personnel	KPSEA
Centre Managers	32581
Deputy Centre Managers	1787
Supervisors	26039
Invigilators	797 70
Security Officers	51108
Clerks at the Distribution Centres	576

Table 1 presents the number of personnel involved during the management and administration of 2023 KPSEA.

1.6 Conduct of the 2023 KPSEA

KNEC developed and provided appropriate assessment tools for the following subjects:

- English;
- Kiswahili/Kenyan Sign Language (KSL);

- Mathematics;
- Integrated Science {Science & Technology, Agriculture, Home Science, and Physical and Health Education (PHE)};
- Creative Arts & Social Studies {Art & Craft, Music, Social Studies and Religious Education}.

1.7 Timetable for 2023 KPSEA

The 2023 KPSEA was conducted between 27th October to 1st November 2023.

1.8 Competencies assessed

The 2023 KPSEA tests were designed to assess competencies while integrating the Core Competencies, Values, and Pertinent and Contemporary Issues as envisaged in the BECF (2019). These were infused in the Multiple Choice Questions (MCQs) that were used in KPSEA.

Table 2: Timetable for administering 2023 KPSEA

Day & Date	Session	Item No.	Paper	Duration
Friday 27.10.2023			Rehearsal Day	
Day 1 Monday 30.10.2023	8.30am - 9.50am	1.	Mathematics	1 Hour 20 Minutes
	8.30am - 9.50am	2.	Mathematics (Large Print)	1 Hour 20 Minutes
	8.30am-10.20am	3.	Mathematics (Braille)	1 Hour 50 Minutes
	10.20am-10.50am		Break	30 Minutes
	10.50am-11.50am	4.	English	1 Hour
	10.50am-11.50am	5.	English (Large Print)	1 Hour
	10.50am-12.10am	6.	English (Hearing Impaired)	1 Hour 20 Minutes
	10.50am-12.10am	7.	English (Braille)	1 Hour 20 Minutes

Day & Date	Session	Item No.	Paper	Duration
Day 2 Tuesday 31.10.2023	8.30am - 10.10am	8.	Integrated Science	1 Hour 40 Minutes
	8.30am - 10.10am	9.	Integrated Science (Large Print)	1 Hour 40 Minutes
	8.30am - 10.40am	10.	Integrated Science (Braille)	2 Hours 10 Minutes
	10.30am - 10.10am		Break	30 Minutes
	11.10am - 12.10am	11.	Kiswahili	1 Hour
	11.10am - 12.10am	12.	Kiswahili (Large Print)	1 Hour
	11.10am - 12.30am	13.	Kiswahili (Braille)	1 Hour 20 Minutes
	11.10am - 12.10am	14.	Kenyan Sign Language	1 Hour
Day 3 Wednesday 01.11.2023	8.30am - 10.10am	15.	Creative Arts & Social Studies	1 Hour 40 Minutes
	8.30am - 10.10am	16.	Creative Arts & Social Studies (Large Print)	1 Hour 40 Minutes
	8.30am - 10.40am	17.	Creative Arts & Social Studies (Braille)	2 Hours 10 Minutes

1.8.1 Core Competencies, Values and Pertinent and Contemporary Issues

The following seven core competencies were integrated in the summative assessment:

- Communication and Collaboration;
- Critical Thinking and Problem Solving;
- Imagination and Creativity;
- Citizenship;
- Digital Literacy;
- Learning to Learn;
- Self-Efficacy

A detailed discussion how the various core competencies, values and PCIs were assessed are discussed is presented in Chapter Three of this report.

1.9 Reporting of the 2023 KPSEA Performance

This section presents the way performance in the tasks in the various subjects were scored and analysed.

1.9.1 Reporting of assessment tasks in the Age based pathway

Learners' achievements in the various subjects at Grade 6 were scored and reported using four performance levels as described in detail as follows:

- Exceeding Expectation (Level 4):** The learner consistently and with a very high level of accuracy displays the knowledge, skills and attitudes/values assessed;
- Meeting Expectation (Level 3):** The learner displays the knowledge, skills and attitudes/values assessed, in most cases;

- c) **Approaching Expectation (Level 2):** The learner displays the knowledge, skills and attitudes/values assessed some of the times;
- d) **Below Expectation (Level 1):** The learner attempts to display the knowledge, skills and attitudes/values assessed and does so with assistance.

Each performance level had a descriptor, which outlined the relative differences between learners' performance at each level. The descriptors were derived from the general learning outcomes spelt out in the curriculum designs. Detailed subject specific descriptors were communicated to schools through the CBA portal for effective feedback to learners, teachers, and parents.

1.9.2 Performance analysis of 2023 KPSEA

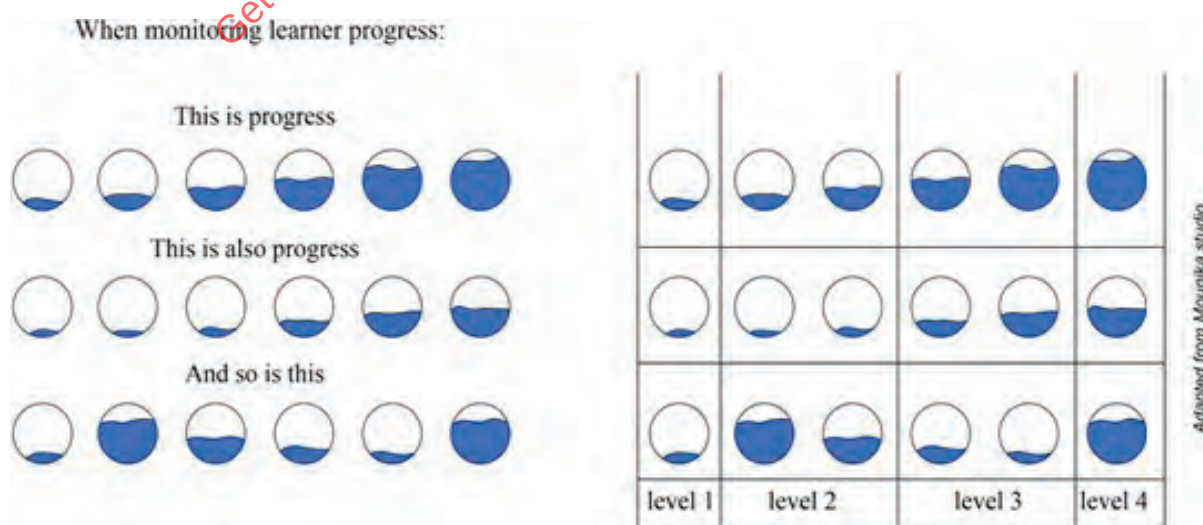
In determining the performance of learners, **Item Analysis** is used. Item analysis involves determining the **Facility Index (F-index)** and **Discrimination Index (D-Index)** of each question in the paper for the chosen sample population of learners.

The facility index refers to the relative measure of **difficulty** or **ease** of a question based on the percentage of learners obtaining the correct response to the question. The **discrimination** index, on the other hand, indicates how successfully a question differentiates abilities of learners from the highest to the lowest achievers. A good question is one that has a **Facility Index** of between **30%** and **80%**. Any question therefore with a Facility Index below 30% is considered to have been found difficult by the learners and one **above 80%** is considered to have been found easy. This is the criteria used by the **Item Analysis programme** to select questions with the low facility indices in a paper for discussion in this national report. A detailed discussion of performance analysis of various items is discussed in Chapter Two of this report.

1.10 The 2023 KPSEA performance reporting strategy

The 2023 KPSEA provides an opportunity to monitor learner progress. Learner progress was measured and reported as demonstrated in figure 2.

Figure 2: Performance Levels of monitoring learner progress



Source: Adapted from Mounika studio

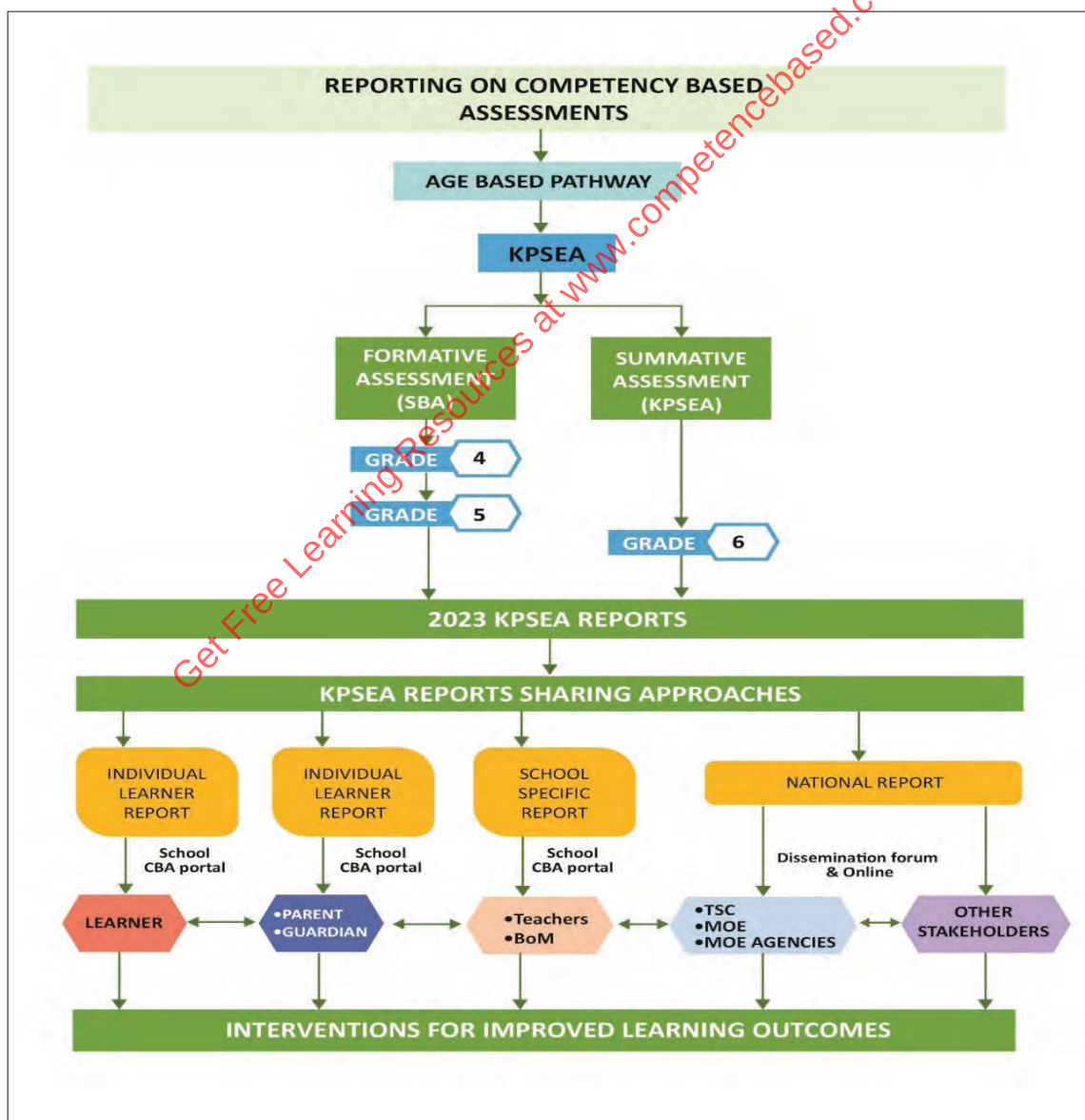
The learners, parents, teachers, and educators need to understand how to identify a learner's strengths and nurture the potential displayed during learning and assessment.

The reporting of 2023 KPSEA adopted the strategies illustrated in figure 3. In line with this, KNEC developed subject specific descriptors to guide on what Grade 6 learners can do based on the analysis of the 2023 KPSEA performance.

This ensures that learners and parents get the Individual learner reports while the school community and other stakeholders get detailed School Specific Reports. These reports have relevant school level analysis, learning gaps per subject and suggested remedies for improving teaching and learning processes.

Figure 3 illustrates the various assessments administered for the Age based pathway, reports generated, as well as the stakeholders who benefit or use the feedback.

Figure3: Reporting strategy on Competency Based Assessment



Source: KNEC, 2022 (2022 KPSEA National Report)

Feedback provides information or critique about prior action or behaviour from an individual that is communicated to another individual or a group to use the information in adjusting and improving their current and future actions. Feedback on learner's performance is an integral component of the CBA. Among others, studies have shown that effective feedback enables learners to identify gaps in their learning and provides suggestions to improve their learning: creates responsive learners; sharpens teaching strategies; provides constructive information for both learners and teachers; and motivates students to learn (Obilor, 2019). It is therefore crucial that feedback is shared with the relevant stakeholders at the appropriate time to allow for timely decision making.

1.10.1 Access and utilisation of KPSEA feedback reports

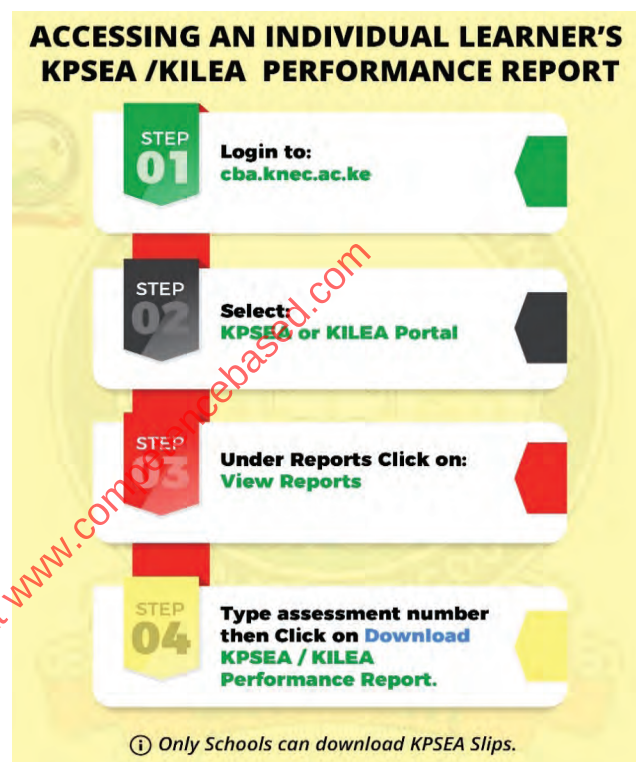
The KPSEA feedback is provided through the Individual Learner Report (ILR) and the School Specific Report (SSR). To ensure that assessment feedback is utilised effectively, there is a need to share the various reports with relevant stakeholders in a manner that it will be easily accessed, understood and utilised.

1.10.2 Individual learner report

Individual learner reports are issued for each learner who will have sat KPSEA. This report is also shared with parents /guardians. It shows learners personal information and the performance level in each of the subjects assessed. This provides the learner with insight/information on strengths, abilities, and areas that require support. The report further provides parents/guardians with the learners' progress and achievement as well as giving insights on areas that the learner may require support.

To access the ILR, schools should login to the KNEC CBA portal using their specified credentials and follow the steps shown in figure 4. The head teacher should endorse the report by signing and stamping before issuing it to the learner.

Figure 4: Steps for accessing and downloading the ILR

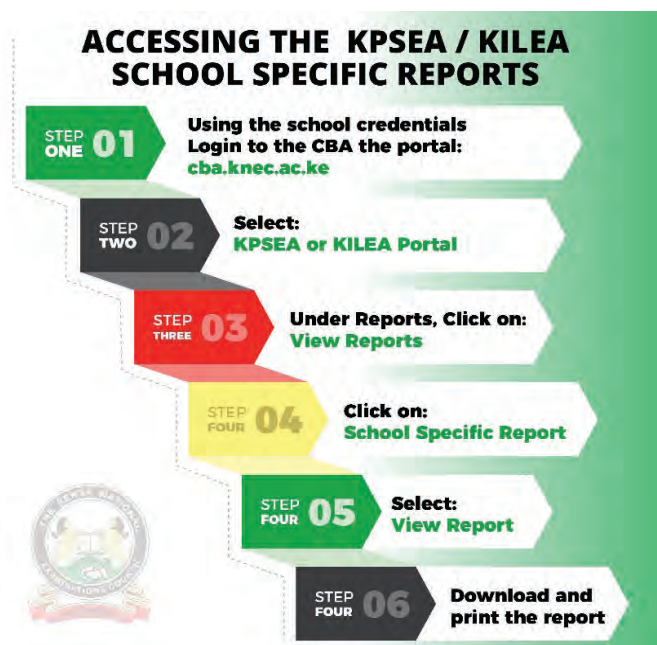


1.10.3 School Specific Report

School Specific Report (SSR) is a detailed analysis of each subject assessed. It shows the individual school's performance in relation to the national mean per subject as well as the misconceptions that may have hindered learners from meeting the expectation in the assessment tasks. The school specific report also outlines possible interventions for each subject.

Figure 5 outlines the steps that schools can follow to access the SSR via the KNEC CBA portal.

Figure 5: Steps for accessing the SSR.



1.11 Background information on 2023 KPSEA

1.11.1 KPSEA assessment centres and registered learners

This section presents analysis of 2023 KPSEA assessment centres per county. This analysis helps understand the contextual factors influencing formative and summative assessment processes and their possible impact on learners' access to quality education and transition. Studies have established that contextual factors also influence teachers' implementation of formative assessment (Li et.al., 2020; Birnbaum et al., 2015). Table 3 presents data on the distribution of assessment centres and registered learners by school type per county.

Table 3: Registration of KPSEA centres and learners by school type per county

County Code	County Name	Centres				Learners		
		Private	Public	Centres	% Per County	Private	Public	Total Entry
01	Taita Taveta	48	210	258	0.79%	933	8584	9517
02	Kwale	128	420	548	1.68%	3220	26928	30148
03	Mombasa	478	102	580	1.78%	12595	13412	26007
04	Kilifi	327	578	905	2.77%	7996	51665	59661
05	Tana River	25	178	203	0.62%	615	6906	7521
06	Lamu	19	103	122	0.37%	376	4331	4707
07	Nyandarua	102	347	449	1.38%	1897	13974	15871
08	Nyeri	109	382	491	1.51%	2630	13293	15923
09	Kirinyaga	119	198	317	0.97%	2692	9315	12007
10	Murang'a	119	507	626	1.92%	2819	21640	24459
11	Kiambu	577	473	1050	3.22%	15650	34277	49927
12	Machakos	354	851	1205	3.69%	7049	28623	35672

County Code	County Name	Centres				Learners		
		Private	Public	Centres	% Per County	Private	Public	Total Entry
13	Kitui	128	1392	1520	4.66%	1979	33496	35475
14	Embu	122	383	505	1.55%	1986	11612	13598
15	Meru	317	744	1061	3.25%	6208	31801	38009
16	Marsabit	52	165	217	0.67%	1478	6168	7646
17	Isiolo	44	99	143	0.44%	1126	3395	4521
18	Makueni	109	896	1005	3.08%	1561	25238	26799
19	Tharaka Nithi	67	426	493	1.51%	958	10382	11340
20	Nairobi	1775	242	2017	6.18%	48339	42459	90798
21	Turkana	63	374	437	1.34%	7222	11570	18792
22	Samburu	19	163	182	0.56%	428	5673	6101
23	Trans Nzoia	231	383	614	1.88%	4938	26583	31521
24	West Pokot	57	605	662	2.03%	1406	17289	18695
25	Bomet	216	682	898	2.75%	4461	23187	27648
26	Uasin Gishu	318	494	812	2.49%	7140	22681	29821
27	Nakuru	424	722	1146	3.51%	11321	47770	59091
28	Kericho	247	553	800	2.45%	5462	21305	26767
29	Nandi	145	750	895	2.74%	2706	24604	27310
30	Laikipia	72	277	349	1.07%	1743	10978	12721
31	Kajiado	407	456	863	2.65%	8921	20115	29036
32	Narok	199	727	926	2.84%	4431	36166	40597
33	Baringo	84	664	748	2.29%	1775	15257	17032
34	Elgeyo Marakwet	69	406	475	1.46%	1281	12615	13896
35	Busia	114	437	551	1.69%	2489	28314	30803
36	Bungoma	255	787	1042	3.19%	5255	51054	56309
37	Kakamega	234	900	1134	3.48%	4820	60765	65585
38	Vihiga	68	381	449	1.38%	1342	17914	19256
39	Kisumu	199	618	817	2.50%	4035	31779	35814
40	Kisii	284	707	991	3.04%	5695	33742	39437
41	Homa Bay	239	871	1110	3.40%	4588	34166	38754

County Code	County Name	Centres				Learners		
		Private	Public	Centres	% Per County	Private	Public	Total Entry
42	Siaya	121	655	776	2.38%	1850	31364	33214
43	Nyamira	114	406	520	1.59%	2323	15157	17480
44	Migori	263	633	896	2.75%	4945	34314	39259
45	Garissa	131	145	276	0.85%	6239	4372	10611
46	Wajir	45	218	263	0.81%	1090	6313	7403
47	Mandera	46	230	276	0.85%	1614	7037	8651
	National	9683	22940	32623	100.00%	231627	1049583	1281210

From Table 3, it is observable that Nairobi, Kitui and Machakos counties recorded the highest number of assessment centres at 2,017 (6.18%), 1,520 (4.65%) and 1,205 (3.69%), respectively. Other counties that had equally high numbers of assessment centers were Nakuru, Kakamega, Homa Bay and Meru at 1,146 (3.51%), 1,134 (3.48%), 1,110 (3.40%) and 1,061 (3.25%), respectively. On the other hand, Lamu, Isiolo, Samburu, Tana River and Marsabit registered low numbers of assessment centres at 122 (0.37%), 143 (0.44%), 182 (0.56%), 203 (0.62%) and 217 (0.67%), respectively. It is noticeable that most of the counties with the large number of assessment centers were predominantly urban while those registering lower assessment centres were counties in Arid and Semi-Arid Lands (ASAL).

It is also notable that counties that recorded an increase in the number of centres from 2022 were Mombasa at 18 (0.06%), Nairobi at 14 (0.04%), and Nakuru at 14 (0.04%). On the other hand, counties that registered high decrease in the number of assessment centres were Meru, Homa Bay and Kisii at 19 (0.06%), 15 (0.05%) and 11 (0.03%), respectively. Reduction in the number of centres could be a pointer to factors that contribute

towards learners accessing quality education and transitioning from one level to another.

From Table 3, it is observable that 22,940 (70.32%) were public assessment centres while 9,683 (29.68%) were private assessment centres. Table 3 further reveals that a majority (1,049,583) of the learners were registered in public assessment centres, representing 81.92% compared to 231,627 (18.08%) registered in private assessment centres. It is also evident from table 3 that the 5 counties with notably high registration for 2023 KPSEA were Nairobi (90,798), Kakamega (65,585), Kilifi (59,661), Nakuru (59,091) and Bungoma (56,309). On the other hand, low registration was observed in Isiolo (4,521), Lamu (4,707) Samburu (6,101), Wajir (7,403), Tana River (7,521), Marsabit (7,646), and Mandera (8,651) counties.

Among the counties with the highest number of learners who sat KPSEA in 2023, Kilifi recorded the highest increase of learners from 46,182 in 2022 to 59,661 in 2023, an increase of 13,479 learners. West Pokot has continued to register a steady progress towards gender parity from a gap of 0.25% in 2022 to 0.14% in 2023.

Desk review of the trends in enrolment of the 2023 Grade 6 cohort shows that a total of 1,325,628 learners were registered at Grade 3 in 2020. Out of these learners, 1,281,210 sat KPSEA in 2023, indicating that an estimated 96.65% of the learners completed upper primary schooling. Further analysis of documents revealed that 95.19%, 96.32% and 93.67% of the learners in Grades 3, 4, and 5, respectively, sat the SBAs. This implies that a number of learners did not take the formative assessments in their respective grades, a factor pointing to lack of compliance with the assessment policy guidelines in some schools.

1.11.2 Registration of learners with disability

The sector policy on education and training of learners and trainees with disabilities recognises the importance of inclusive education by emphasising the need for all learners to learn together in an inclusive environment. The policy aligns the provision of education and training to the Constitution of Kenya 2010, the Basic Education Act (2013), as well as the Sustainable Development Goal (SDG) No. 4 on equitable, inclusive, quality education and lifelong learning for all. The Ministry of Education (MoE) has taken concrete steps to transform provision of education for learners with special needs and disabilities to inclusive education (MoE, 2018).

The section presents the distribution of learners with disability that registered for the KPSEA and the findings are captured in table 4.

From Table 4, it can be observed that out of 3,268 learners with disabilities who sat the 2023 KPSEA, 1,467 (44.89%) were learners with physical disabilities followed by 948 (29.01%) who were learners with hearing impairment. Learners with low vision were 705 (21.57%) while 148 (4.53%) were learners with visual impairment.

Regarding enrolment by county, Bungoma led with an enrolment of 164 (5.02%) learners. Other counties that registered higher numbers included Kiambu at 160 (4.90%), Kisumu at 153 (4.68%), Kakamega 145 (4.44%), Nairobi 143 (4.38%), and Migori at 143 (4.38%). Lamu, Wajir, Samburu, Embu and Taita Taveta reported the lowest registration of learners with disabilities at 2 (0.06%), 16 (0.49%), 18 (0.55%), 20 (0.61%) and 23 (0.70%) respectively.

It is observed that counties in ASAL reported very low numbers of learners with disabilities while those largely urbanised counties reported slightly higher numbers. There is a need for effort to ensure all learners access education equitably despite their status.

Table 4: Learners registered for 2023 KPSEA by disability.

	Type of disability	Frequency	Percent
1	Learners with visual impairment	148	4.53%
2	Learners with low vision	705	21.57%
3	Learners with hearing impairment	948	29.01%
4	Learners with physical disabilities	1467	44.89%
	Total	3268	100.00%

1.11.3 Learners registered for 2023 KPSEA by gender

Factors such as poverty, gender disparity and regional disparities have been found to affect learners' access to education (Limo & Muchimuti, 2022; MoE, 2018). In an effort to understand how these variables affect access to education in Kenya, the total number of learners registered for 2023 KPSEA was analysed per county and gender. Table 5 presents the total number of learners registered for KPSEA in 2023 by gender.

From table 5, it is observable that a total of 1,281,210 learners sat KPSEA in 2023. This is a slight increase from 1,253,577 learners who took the assessment in 2022. More boys (657,893) than girls (623,317) registered for the 2023 KPSEA. The proportion of boys who registered for the 2023 KPSEA was higher than that of girls by 34,576 (2.70%) compared to 43,649 (3.48%) in 2022.

This implies a continuous progress towards gender parity in access to primary school education, nationally.

It is also notable that registration for 2023 KPSEA in some counties showed gender parity. For instance, Kilifi County had a reduced gender gap of 0.02% in enrolment between boys and girls. In West Pokot, Marsabit and Migori counties, boys were slightly more than girls by 0.14%, 0.47% and 1.08% respectively. Commendably, West Pokot continues to register a steady progress towards reducing the gender gap of 0.25% as observed in 2022 to 0.14% in 2023.

Table 5 further reveals that counties like Mandera, Wajir, Garissa, and Turkana had a wider gender gap in registration at 21.84%, 11.82%, 11.34% and 6.76% respectively, with more boys registered than girls.

Table 5: Learner's registration for 2023 KPSEA by gender

	County	Girls		Boys		Total
		f	%	f	%	
1	Taita Taveta	4670	49.07%	4847	50.93%	9517
2	Kwale	14846	49.24%	15302	50.76%	30148
3	Mombasa	13220	50.83%	12787	49.17%	26007
4	Kilifi	29826	49.99%	29835	50.01%	59661
5	Tana River	3689	49.05%	3832	50.95%	7521
6	Lamu	2240	47.59%	2467	52.41%	4707
7	Nyandarua	7704	48.54%	8167	51.46%	15871
8	Nyeri	7801	48.99%	8122	51.01%	15923
9	Kirinyaga	5893	49.08%	6114	50.92%	12007
10	Murang'a	11791	48.21%	12668	51.79%	24459
11	Kiambu	24581	49.23%	25346	50.77%	49927
12	Machakos	17313	48.53%	18359	51.47%	35672
13	Kitui	16964	47.82%	18511	52.18%	35475
14	Embu	6527	48.00%	7071	52.00%	13598

	County	Girls		Boys		Total
		f	%	f	%	
15	Meru	18541	48.78%	19468	51.22%	38009
16	Marsabit	3805	49.76%	3841	50.24%	7646
17	Isiolo	2355	52.09%	2166	47.91%	4521
18	Makueni	12683	47.33%	14116	52.67%	26799
19	Tharaka Nithi	5510	48.59%	5830	51.41%	11340
20	Nairobi	45484	50.09%	45314	49.91%	90798
21	Turkana	8761	46.62%	10031	53.38%	18792
22	Samburu	2953	48.40%	3148	51.60%	6101
23	Trans Nzoia	15463	49.06%	16058	50.94%	31521
24	West Pokot	9334	49.93%	9361	50.07%	18695
25	Bomet	13343	48.26%	14305	51.74%	27648
26	Uasin Gishu	14417	48.35%	15404	51.65%	29821
27	Nakuru	28717	48.60%	30374	51.40%	59091
28	Kericho	12856	48.03%	13911	51.97%	26767
29	Nandi	12975	47.51%	14335	52.49%	27310
30	Laikipia	6164	48.46%	6557	51.54%	12721
31	Kajiado	14169	48.80%	14867	51.20%	29036
32	Narok	19585	48.24%	21012	51.76%	40597
33	Baringo	8210	48.20%	8822	51.80%	17032
34	Elgeyo Marakwet	6795	48.90%	7101	51.10%	13896
35	Busia	15118	49.08%	15685	50.92%	30803
36	Bungoma	27508	48.85%	28801	51.15%	56309
37	Kakamega	31715	48.36%	33870	51.64%	65585
38	Vihiga	9289	48.24%	9967	51.76%	19256
39	Kisumu	17536	48.96%	18278	51.04%	35814
40	Kisii	19078	48.38%	20359	51.62%	39437
41	Homa Bay	18649	48.12%	20105	51.88%	38754
42	Siaya	16177	48.71%	17037	51.29%	33214
43	Nyamira	8295	47.45%	9185	52.55%	17480
44	Migori	19418	49.46%	19841	50.54%	39259
45	Garissa	4704	44.33%	5907	55.67%	10611
46	Wajir	3264	44.09%	4139	55.91%	7403
47	Mandera	3381	39.08%	5270	60.92%	8651
	National	623317	48.65%	657893	51.35%	1281210

1.11.4 KPSEA registration by age

Studies show that the age of learners has a bearing on learners' achievement (Çelikkol, 2023; Olalowo, 2020). In Kenya, the official school entry age at Grade 1 is six (6) years. The KPSEA was administered towards the end of the school year when learners were completing Grade 6. It was expected that these learners would be aged between 11 and 12 years. A pupil would therefore be termed as overage if he/she were above 12 years.

This section sought to analyse data related to the age of Grade 6 learners at the time they sat 2023 KPSEA.

Learners between 11 and 12 years are regarded as age appropriate, while those less than 11 years and above 12 years as underage and overage, respectively.

According to the National Education Sector Strategic Plan (NESSP) 2018-2022, the new education system (2-6-3-3) consists of 2 years of pre-primary (for ages 4-5 years); 3 years of lower primary and 3 years of upper primary (for ages 6-11 years); and 3 years of Junior School as well as 3 years of Senior School (for ages 12-17 years). Table 6 presents the number of learners registered for 2023 KPSEA by age.

Table 6: KPSEA registration by age

	County	Below 11 years	11 and 12 years	Above 12 years
1	Taita Taveta	1402 (14.73%)	6974 (73.28%)	1141 (11.99%)
2	Kwale	1596 (5.29%)	12571 (41.70%)	15981 (53.01%)
3	Mombasa	4371 (16.81%)	16889 (64.94%)	4747 (18.26%)
4	Kilifi	3463 (5.80%)	25647 (42.99%)	30551 (51.21%)
5	Tana River	1112 (14.78%)	3154 (41.94%)	3255 (43.28%)
6	Lamu	492 (10.46%)	2596 (55.15%)	1619 (34.39%)
7	Nyandarua	4220 (26.59%)	10676 (67.27%)	975 (6.14%)
8	Nyeri	4545 (28.54%)	10784 (67.73%)	594 (3.73%)
9	Kirinyaga	3239 (26.98%)	8085 (67.34%)	682 (5.68%)
10	Murang'a	8009 (32.75%)	15503 (63.38%)	947 (3.87%)
11	Kiambu	13619 (27.28%)	33805 (67.71%)	2503 (5.01%)
12	Machakos	10161 (28.48%)	23086 (64.73%)	2425 (6.79%)
13	Kitui	6630 (18.69%)	22750 (64.13%)	6095 (17.18%)
14	Embu	4467 (32.85%)	8339 (61.33%)	792 (5.82%)
15	Meru	7515 (19.77%)	24312 (63.96%)	6182 (16.26%)
16	Marsabit	1732 (22.65%)	3801 (49.71%)	2113 (27.64%)

	County	Below 11 years	11 and 12 years	Above 12 years
17	Isiolo	920 (20.35%)	2383 (52.71%)	1218 (26.94%)
18	Makueni	7077 (26.41%)	17611 (65.71%)	2111 (7.88%)
19	Tharaka Nithi	2576 (22.72%)	7228 (63.74%)	1536 (13.54%)
20	Nairobi	24532 (27.02%)	59280 (65.29%)	6986 (7.69%)
21	Turkana	2360 (12.56%)	8437 (44.90%)	7995 (42.54%)
22	Samburu	1519 (24.90%)	3128 (51.27%)	1454 (23.83%)
23	Trans Nzoia	5655 (17.94%)	19684 (62.45%)	6182 (19.61%)
24	West Pokot	5519 (29.52%)	10128 (54.17%)	3048 (16.30%)
25	Bomet	8595 (31.09%)	15530 (56.17%)	3523 (12.74%)
26	Uasin Gishu	5325 (17.86%)	19781 (66.33%)	4715 (15.81%)
27	Nakuru	12110 (20.49%)	39986 (67.67%)	6995 (11.84%)
28	Kericho	8490 (31.72%)	15239 (56.93%)	3038 (11.35%)
29	Nandi	3662 (13.41%)	17965 (65.78%)	5683 (20.81%)
30	Laikipia	2679 (21.06%)	8254 (64.89%)	1788 (14.05%)
31	Kajiado	6857 (23.62%)	16541 (56.97%)	5638 (19.42%)
32	Narok	9766 (24.06%)	20232 (49.84%)	10599 (26.10%)
33	Baringo	6778 (39.80%)	8704 (51.10%)	1550 (9.10%)
34	Elgeyo Marakwet	2598 (18.70%)	9189 (66.13%)	2109 (15.18%)
35	Busia	3487 (11.32%)	16986 (55.14%)	10330 (33.54%)
36	Bungoma	12017 (21.34%)	32552 (57.81%)	11740 (20.85%)
37	Kakamega	9318 (14.21%)	40195 (61.29%)	16072 (24.50%)
38	Vihiga	2918 (15.15%)	12755 (66.24%)	3583 (18.61%)
39	Kisumu	5447 (15.21%)	22404 (62.56%)	7963 (22.24%)
40	Kisii	9119 (23.12%)	22961 (58.22%)	7357 (18.66%)
41	Homa Bay	6869 (17.73%)	20828 (53.74%)	11057 (28.53%)
42	Siaya	4222 (12.71%)	20568 (61.93%)	8424 (25.36%)
43	Nyamira	3875 (22.17%)	10580 (60.53%)	3025 (17.31%)
44	Migori	7164 (18.25%)	20444 (52.07%)	11651 (29.68%)
45	Garissa	829 (7.81%)	3097 (29.19%)	6685 (63.00%)
46	Wajir	1682 (22.72%)	3103 (41.92%)	2618 (35.36%)
47	Mandera	1160 (13.41%)	3178 (36.74%)	4313 (49.86%)
	National	261698 (20.42%)	757924 (59.16%)	261588 (20.42%)

It is evident from table 6 that nationally, age appropriate (11 to 12 years) learners who sat KPSEA in 2023 were 757924 (59.16%), an improvement of 9.78% from 619071 (49.38%) who sat in 2022. On the other hand, 261588 (20.42%) learners were overage (over 12 years old), a notable improvement from 592172 (47.24%) who sat the 2022 KPSEA.

Among the counties that contributed to the high national proportion of overage learners includes Garissa, Kwale, Kilifi, Mandera and Tana River counties at 63.00%, 53.02%, 51.21%, 49.86% and 43.28% respectively. These proportions, however, are lower than those in 2022 which had 5 counties recording over 70% enrollment of over age learners. This shows that there is an improvement in compliance with school entry age policy.

It can also be observed that Taita Taveta, Nyeri, Kiambu, Nakuru, and Kirinyaga counties had the highest proportion of learners falling between 11 and 12 years (age appropriate) at 73.28%, 67.73%, 67.71%, 67.67% and 67.34% respectively.

Further, table 6 reveals that Kwale, Kilifi, Garissa, Lamu and Busia counties had the lowest proportions of learners falling below the age of 11 years (underage) at 5.29%, 5.80%, 7.81%, 10.46%, and 11.32% respectively. On the hand, counties with the highest number of underage learners were Baringo, Embu, Murang'a, Kericho and Bomet at 39.80%, 32.85%, 32.75%, 31.72% and 31.09% respectively.

1.12 Conclusion

The implication of the analysis of background information on learners who sat the 2023 KPSEA is important in understanding Grade 6 learners transiting to Junior School. This transitioning stage marks an important milestone in the learner's academic pursuit. It is also a stage which gives a clear indicator on access to education.

Chapter 2

Learners Performance in the 2023 KPSEA

2.1 Introduction

This chapter presents information on learners' performance. In addition, it provides data on the total candidature per subject, national subject weighted means and national standard deviations, as well as the means and standard deviations per subject by gender. It also presents learners' performance levels. Moreover, the chapter captures analysis of test items, in each subject, with a facility index below 30% and possible reasons for the dismal performance in the respective items. It further presents suggested remedies to mitigate the challenges noted in performance.

2.2 Background information

The 2023 KPSEA consisted of 14 subjects. Each subject had a given number of multiple-choice test items. A test item is a specific question or task presented to a learner to measure the acquisition of knowledge, skills, values, and abilities.

The analysis of assessment tools involves the statistical interpretation of each item to evaluate its quality and effectiveness in a test. In CBA, item analysis is used to provide feedback on assessment efficacy and, hence, inform subsequent assessments. The item analysis was undertaken to generate the subject means, national means, and standard deviation per subject, as well as facility and difficulty indices.

In general, a standard deviation is a measure of how the scores are spread in relation to the mean. A low standard deviation indicates the scores are clustered around the mean and that the assessment was more consistent in measuring the ability, competencies, and knowledge of the learners. A high standard deviation indicates that the scores are more spread out, indicating high variability and less consistency.

Table 7 presents the data on the total candidature per subject, national means and national standard deviations, as well as the means and standard deviations per subject by gender.

Table 7: Candidature per subject, national means and national standard deviations

Subject	KR-20 Reliability Coefficient	ALL			GIRLS			BOYS		
		Sat	Mean	SD	Sat	Mean	SD	Sat	Mean	SD
English Language	0.82	1239712	21.38	9.10	604698	21.98	8.96	634988	20.81	9.19
Kiswahili Lugha	0.84	1238020	21.06	7.67	603907	21.66	7.42	634087	20.49	7.87
Kenyan Sign Language	0.81	825	13.33	5.76	413	13.30	5.83	412	13.36	5.69
Mathematics	0.80	1237966	18.51	8.43	603851	18.57	8.24	634084	18.46	8.61
Science and Technology	0.83	1231715	8.65	4.31	600689	8.57	4.23	630998	8.72	4.39
Agriculture	0.78	1230571	5.69	2.85	600197	5.74	2.82	630348	5.65	2.87
Home Science	0.83	1230645	5.61	2.87	600215	5.81	2.88	630404	5.43	2.85
Physical and Health Education	0.80	1232951	9.55	4.51	601323	9.62	4.42	631602	9.48	4.59
Social Studies	0.84	1231814	10.37	4.57	600740	10.49	4.47	631046	10.25	4.66
Art and Craft	0.80	1230046	7.86	3.57	599893	8.10	3.55	630126	7.64	3.58
Music	0.82	1229934	6.42	3.20	599818	6.53	3.11	630089	6.32	3.29
Christian Religious Education	0.81	1145657	12.46	5.56	560924	12.94	5.50	584733	11.99	5.59
Islamic Religious Education	0.79	75020	11.13	5.34	34585	11.03	5.28	40435	11.22	5.38
Hindu Religious Education	0.80	33	7.89	4.06	25	6.42	3.18	8	12.48	3.00

From Table 7, it was established that learner performance on most subjects recorded an above average mean. This implies that the overall performance in all subjects offered in the 2023 KPSEA fell within the expected range of scores with an exception Kenyan Sign Language (KSL) where learners achieved slightly below the average mean performance.

Notably, Agriculture, Home Science and Music had low standard deviations (2.85, 2.88 and 3.20 respectively). English (9.06), Mathematics (8.36) and Kiswahili (7.63) had the highest standard deviations implying a greater variability in the learner performance outcomes that can effectively inform policy interventions for better learning outcomes.

From table 7, it is observable that in all subjects, performance of boys and girls was comparable. For instance, in Mathematics boys registered a mean of 18.56 while girls attained a mean of 18.68. In Agriculture, the mean of boys was 5.65 while girls registered a mean of 5.74.

A comprehensive item analysis was done on the assessment tools to determine the internal consistency of the tools for assessing the learners achievements in the KPSEA subjects. The Kuder Richardson reliability coefficient (KR-20) formula was used. The KR-20 formula is a measure of internal consistency for examinations with dichotomous choices. Conventionally, a KR-20 figure of 0.8 is considered the minimal acceptable value. KR-20 ranges from 0.0 to 1.0; the closer to 0 indicates a very poor reliability and closer to 1.0 indicates high reliability. All the tests had less than 50 items differing in difficulty levels and with a KR-20 reliability coefficient of .8 as indicated in table 7. This points to the homogeneous tests

used for the 2023 KPSEA and whose results can be used confidently to draw meaningful policy interventions. Reporting on the reliability of the assessment tools ensures the determination of how much variability in test scores is a result of variability in learners taking the test and not some other random error.

Regarding performance by gender, the performance of boys and girls was comparable in most subjects. For instance, in Mathematics boys registered a mean of 18.46 while girls attained a mean of 18.57. It was notable that girls registered better means in all subjects except in Science and Technology; KSL; IRE and HRE.

2.3 National performance of learners per subject by performance level

The national performance of learners was analysed in terms of performance levels. Table 8 presents KPSEA Overall performance per subject by performance levels.

Table 8: KPSEA Overall performance per subject by performance levels

Subject	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation	Total
English Language	241,196 (19.46%)	519,410 (41.90%)	398,181 (32.12%)	80,925 (6.53%)	1,239,712
Kiswahili Lugha	135,406 (10.94%)	704,414 (56.90%)	323,929 (26.17%)	74,272 (6.00%)	1,238,021
Kenyan Sign Language	18 (2.18%)	170 (20.61%)	485 (58.79%)	152 (18.42%)	825
Mathematics	128,814 (10.41%)	466,956 (37.72%)	525,589 (42.46%)	116,607 (9.42%)	1,237,966
Science and Technology	129,476 (10.95%)	451,149 (38.14%)	371,471 (31.41%)	230,715 (19.51%)	1,182,811
Agriculture	142,554 (11.58%)	468,380 (38.06%)	467,385 (37.98%)	152,253 (12.37%)	1,230,572

Subject	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation	Total
Home Science	110,812 (9.00%)	476,004 (38.68%)	462,408 (37.57%)	181,421 (14.74%)	1,230,645
Physical and Health Education	196,043 (15.90%)	523,853 (42.49%)	318,560 (25.84%)	194,495 (15.77%)	1,232,951
Social Studies	194,134 (15.76%)	579,427 (47.04%)	344,993 (28.01%)	113,260 (9.19%)	1,231,814
Art and Craft	203,651 (16.56%)	558,651 (45.42%)	300,815 (24.46%)	166,929 (13.57%)	1,230,046
Music	124,200 (10.10%)	467,990 (38.05%)	405,953 (33.01%)	231,791 (18.85%)	1,229,934
Christian Religious Education	319,313 (27.87%)	446,868 (39.01%)	291,897 (25.48%)	87,579 (7.64%)	1,145,657
Islamic Religious Education	16,006 (21.34%)	27,667 (36.88%)	21,494 (28.65%)	9,853 (13.13%)	75,020
Hindu Religious Education	1 (3.03%)	13 (39.39%)	12 (36.36%)	7 (21.21%)	33

From Table 8, it can be observed that in the following seven (7) out of the fourteen (14) subjects sat, most learners were exceeding or meeting expectation in: English (61.36%); Kiswahili (66.90%); Physical and Health Education (58.39%); Social Studies (62.80%); Art and Craft (61.98%); Christian Religious Education (66.88%); and Islamic Religious Education (58.22%).

Learners' performance in the following two subjects was at approaching or below expectation: Kenyan Sign language (77.21%); and Hindu Religious Education

This indicates there is a need to enhance teaching and learning resources, retooling teachers for better understanding and the interpretation and implementation of curriculum designs and investigate further causes of this performance

trend. Having strong foundational learning in these subjects will ensure that learners exiting at the end of primary schooling have better chances of understanding subsequent content in the subject. Subject specific interventions could be considered to ensure that the subjects with learners performing at approaching or below expectation posed better learning outcomes.

2.4 Analysis of items with a facility index below 30%

For a given test item, the facility index is the proportion of learners that select the right answer. When the facility index is below thirty percent, it means that a large number of learners were unable to choose the right answer from the options available. In this section, there is an analysis of all test items with a facility index below 30%.

2.4.1 English

The English assessment had 30 multiple choice items that were based on the skills (listening, speaking, reading) and grammar. The learners were supposed to read comprehension passages of about 120 words and respond to direct, inference, prediction, and vocabulary questions. The development of the assessment was guided by the following learning outcomes.

The Upper Primary learning outcomes provide that by the end of the upper primary the learner should be able to:

- listen for the main idea and specific information from a variety of print and digital texts;
- read a variety of texts fluently, interpretively, and with comprehension for lifelong learning;
- use grammatical forms to communicate ideas, opinions, and emotions appropriately in different settings.

Table 9 presents items in the English assessment tool that recorded a facility index below 30%.

Item 1

The correct option for **item 1** was **C**. It required the candidates to provide a response that would complete the logical flow of the conversation. Many of the candidates selected option **A** (**53.63%**) as the correct answer, which seemed plausible but was rather an informal response in this context.

Option C was formal and the most appropriate response for a telephone conversation.

Suggested remedy: Teachers should engage learners in role play to enhance their understanding of flow in a conversation and the use of polite language in telephone conversation. Teachers should be equipped with pedagogical skills for conducting conversations in various contexts.

Item 2

The correct option for **item 2** was **A**. The candidates were required to provide a response that would complete the logical flow of the conversation. Almost half of the candidates (**49.76%**) selected option **C**, “*I will be late for school today.*” instead of “*May I be late for school today?*” This indicated limited knowledge of the use of polite language in telephone conversation.

Suggested remedy: Teachers should assist learners in recognizing signs of conversation flow and how to use courteous language when speaking on the phone. Teachers should also endeavour to improve their pedagogical skills in the teaching of the logical flow of conversation.

Item 5

The correct option for **item 5** was **C**. The candidates were expected to fill in the blank space with the correct preposition from the choices given after the item. A substantial proportion of learners (40.95%) selected **Option A**, “*by*” instead of “*on*”. This showed a lack of knowledge about the appropriate use of prepositions.

Table 9: Items in English with a facility index below 30%

Item No.	Content/skill assessed	Key	Facility index (%)
1	Response to the logical flow in a conversation.	C	27.85
2	Response to the logical flow in a conversation.	A	25.33
5	Use of correct prepositions in sentences.	C	27.26
11	Inferring meaning from the context.	C	20.72

It may also be a consequence of mother tongue interference.

Suggested remedy: Teachers should give learners both oral and written practice on prepositions and remind them that syntactic structures in the English language may differ from those of our first languages. Teachers should exploit varied resources for the teaching and learning of grammatical structures, such as interactive online resources.

Item 11

It was an item based on a reading comprehension passage. The candidates were expected to infer from the passage that the shopkeeper was surprised because Hassan had gone back to him immediately, yet he had just left the shop. The correct option for **item 11** was **C**. They failed to identify the part of the text that would give clues to the correct answer. A substantial proportion of learners (48.97%) selected **Option A**, “*Hassan returned the money,*” instead of “*Hassan had just left the shop.*”.

Suggested Remedy: Teachers should train learners on how to identify and use contextual clues to arrive at the right response. Teachers utilize diverse reading comprehension strategies to sharpen learners’ interpretive and inferential skills for reading.

2.4.2 Kiswahili Lugha

The Kiswahili assessment had 30 multiple choice items that were based on the skills (listening, speaking, reading) and grammar. The learners were supposed to read comprehension passages of about 140 words and respond to direct, inference, prediction, and vocabulary questions. The development of the assessment was guided by the following level learning outcomes:

The upper primary learning outcomes provide that by the end of the upper primary, the learner should be able to:

- listen keenly and respond appropriately using Kiswahili language in a variety of communicative media.
- read a variety of texts from print and digital media fluently with comprehension for lifelong learning.
- use grammatical forms to communicate creatively in both spoken and written forms.

Table 10 presents items in Kiswahili Lugha that recorded a facility index below 30%.

Item 1

The item assessed the use of vocabulary in context. The correct response was **B**, **masalkheri** with 14.31%. However, the highest percentage of learners went for option **D**, **shikamoo** at 52.06%.

Table 10: Items with facility index of below 30% in Kiswahili

Item No.	Content/skill assessed	Key	Facility index (%)
1	Use of vocabulary in a given context- Greeting	B	14.31
3	Appropriate completion of a statement in a conversation	B	23.85
5	Use of vocabulary in context	C	22.58
11	Inferring meaning from the context.	D	29.44
16	Use of vocabulary in context	D	15.08
29	Use of stylistic devices in context	B	22.57

This could have been due to the fact that **shikamoo** is a commonly used form of greeting compared to **masalkheri**.

Suggested remedy

Teachers should guide and engage learners in role playing so that they can have an in-depth understanding of the aspects of conversation and access to a wide range of vocabulary. Teachers should engage learners in activities like preparing greeting cards and asking learners to pick either individually or in groups. Teachers should use a variety of greetings when greeting the learners. Teachers should be equipped with pedagogical skills on conducting conversations.

Item 3

The item assessed conversational aspects. The learner was expected to select the appropriate completion for the following statement: Kumbuka tusipoziba ufa... The choice of responses was equally distributed, with slightly more candidates choosing option A. Bila shaka at 28.50%. Option B (the correct response), **Tutajenga ukuta** attracted a paltry 23.85%. The question tested an aspect that is not commonly used at this level.

Suggested remedy

Teachers should guide and give learners practice identifying indicators of flow in a conversation. Teachers should engage learners in activities that will enable them to identify indicators of flow in a conversation, like the use of a substitution table. Teachers should also engage learners in role playing so that learners can have an in-depth understanding of various conversational aspects.

Item 5

Question 5 assessed the use of vocabulary in context. The learners were expected to provide a synonym for the word **mwandani**. Option A,

ndugu attracted a higher percentage (35.05%) than the correct response, C (22.58%). **Ndugu** is a more familiar vocabulary at this level in comparison to **sahibu**.

Suggested remedy

Teachers should guide and give learners practice identifying synonyms for various words. Teachers should provide more contexts where grade level vocabulary will be used. Teachers embrace the use of vocabulary games and word maps in teaching. Ministry of Education to ensure class readers are available to the learners so as to expose the learners to a variety of contexts.

Item 11

This was a reading comprehension item. The correct response- for **item 11** was **D**. the learners were expected to infer from the passage that the narrator understands investment because he/ she plans to sell milk so as to get some money. The learners were unable to identify the part of the text that would give clues to the correct response. A substantial proportion of the learners (30.94%) selected **option A**, "*Anatumia likizo yake vizuri*" instead of "*Anapanga kuuza maziwa ilia patepesa.*"

Suggested remedy

Teachers should train learners on how to identify and use contextual clues to arrive at the right response. Teachers should utilize diverse reading comprehension strategies to sharpen learners' interpretive and inferential skills for reading.

Item 16

Question 16 required the learners to fill in the blank in a cloze test with an appropriate synonym of the word **afya**. Majority of the learners picked option A. **uhai** (42.90%) compared to the correct

response, D. **siha** at 15.08%. This once again points to limited access to the vocabulary by the learners.

Suggested remedy

Teachers should guide learners on how to identify and use contextual clues to arrive at the right response. Teachers should expose learners to a variety of texts to widen their access to deepen their understanding of the use of vocabulary in context. Ministry of Education to ensure that class readers are available to the learners so as to expose the learners to a variety of contexts.

Item 29

Question 29 assessed use of idioms in context. Majority of the learners picked option A- **anamfanyia hima** (35.36%) whereas the correct response had 22.57%-**anampiga jeki**. Option A had a more familiar idiom compared to the correct response.

Suggested remedy

Teachers should expose learners to a variety of texts to widen their access and use of idiomatic expressions. Teachers to expose learners to a variety of reading texts, recorded, pre-recorded and authentic tasks. Ministry of Education to ensure that class readers are available to the learners so as to expose the learners to a wide range of contexts.

2.4.3 Mathematics

The Mathematics assessment consisted of 30 multiple choice items which were based on; Numbers, Measurement, Geometry, Interpreting data and Algebra.

The Upper Primary learning outcomes provide that by the end of the upper primary the learner should be able to:

- demonstrate mastery of number concepts by working out problems in day to day life;
- apply measurement skills to find solutions to problems in a variety of contexts;
- describe properties of geometrical shapes and spatial relationships in real life experiences;
- collect, represent and analyse data to solve problems; and analyse information using algebraic expressions in real life situations.

Out of the 30 multiple choice items assessed, 7 items had a facility index of less than 30 %. This implies that the percentage of learners answering the questions correctly was below 30 % indicating that the selected questions were difficult for most learners. Table 11 presents items that recorded a facility index of less than 30 %.

Table 11: Items with facility index of below 30% in Mathematics

Item No.	Content/skill assessed	Key	Facility index (%)
6	Performing combined operations involving +, —, × and ÷ of whole numbers.	C	28.91
8	Subtracting mixed fractions.	D	19.82
14	Working out the area of combined shapes.	B	28.13
15	Converting litres to millilitres.	C	20.59
23	Measuring angles using a protractor.	D	16.51
29	Forming simple inequalities with one unknown.	C	29.06
30	Forming simple equations with one unknown.	D	20.52

Items 6 and 8

Items 6 and 8 assessed the concept of Numbers. Item 6 required learners to perform 4 combined operations in the correct order in the task given. The correct option for item 6 was **C (58)**. Majority of the learners (**36.84%**) selected option **D (98)**. This indicated that most learners were not able to perform the combined operations in the correct order.

The correct option for item 8 was **D ($8\frac{1}{2}$)**. The learners were required to correctly subtract the fraction. A substantial number of the learners (36.52%) selected option **C ($8\frac{2}{3}$)**. This indicated that most learners had difficulties subtracting mixed fractions.

Suggested remedy

Teaching and learning of the strand needs to be approached with sufficient practice in working out questions involving combined operations. The practice questions should start with low order questions involving two combined operations up to the highest combined operations. Learners should also be exposed to real life situations involving application of combined operations.

The learners should be exposed to different methods of subtracting mixed fractions. These methods are; adding or subtracting whole numbers and fraction parts separately or writing both fractions in improper form. The concept of equivalent fractions and its applications in addition and subtraction of fractions needs to be emphasized to the learners. The learners should be allowed to use any appropriate method.

Items 14 and 15

Items 14 and 15 assessed the strand of Measurement. Item 14 required learners to work

out the area of two combined shapes. The correct option for item 14 was **B (5590 cm²)**. The majority of the learners (**28.13%**) selected option **D (3185 cm²)** which indicated that the learners calculated the area of only one shape.

The correct option for item 15 was **C (3700 millilitres)**. The learners were required to convert the capacity of a liquid from litres to millilitres. The majority of the learners (**30.22%**) selected option **A (37 millilitres)**. The performance in these two items indicated inadequate application of skills acquired in relation to the context of the item tested.

Suggested remedy

Teaching and learning of the strand need to be approached with practical activities which are learner centred. These activities should include conversion of units of capacity, using unit squares to work out areas and reinforcing the formulas used in calculating the area of combined shapes.

Item 23

Item 23 assessed the strand of Geometry. Learners were required to measure a given angle using a protractor. The correct option for the item was **D (40°)**. Most of the learners (**31.25%**) selected option **B (80°)**. The performance in this item indicated that the majority of the learners were unable to use the protractor correctly while others measured the wrong angle. This could be an indicator that learners lacked exposure to the use of geometrical instruments.

Suggested remedy

The items tested showed that teachers were not engaging learners in practical activities during the measurements. Parental involvement in ensuring that geometrical instruments are available from

early grades for learners to familiarize and be able to manipulate them.

Teachers also need to enhance group work among the learners which allows them to become active participants in the teaching and learning process. Group work helps learners develop skills such as problem-solving, conflict resolution, leadership, critical thinking, time management, exposing the learners to diverse ideas and approaches. Learners are able to articulate their ideas, refine concepts, enhance interpersonal communication skills and facilitate a deeper understanding of the course content.

Items 29 and 30

Items number 29 and 30 assessed the strand Algebra. For item 29, learners were required to form a simple inequality with one unknown. The correct option for item 29 was **C ($p-4>6$)**. Most of the learners (**26.62%**) selected option **A ($p-4<6$)** indicating that the learners worked out the question but were unable to identify the correct inequality sign.

The correct option for item 30 was **D ($x/50=8500$)**. The learners were required to form a correct simple equation with one unknown. Majority of the learners (**31.37%**) selected option **C ($x+50=8500$)**. The item was presented as an authentic task implying that the majority of learners had difficulties responding to contextual tasks. The learners were not able to critically analyse the contexts and apply mathematical concepts learnt.

Suggested remedy

The items tested showed that teachers were not engaging learners in practical activities during the introduction of the strand Algebra. These practical activities enhance acquisition of concepts of unknowns and operations on unknowns.

Teachers to ensure that the learners are well conversant with the English language used in the assessments. Learners are expected to comprehend contexts and follow the right steps in working out the items.

2.4.4 Science and Technology

The Science and Technology assessment had 15 multiple choice items which were based on Living Things, Environment, Health Education, Matter, Force and Energy, and Weather and Sky. The development of the assessment was guided by the following learning outcomes at the end of the upper primary that provide that a learner should be able to:

- interact with the environment for learning and sustainable development;
- appreciate the contribution of science and technology in the provision of innovative solutions;
- use scientific knowledge to observe, explain the natural world;
- make functional discoveries that impact individuals and the wider society; and
- use innovative approaches as well as critical thinking and problem-solving skills to stimulate scientific inquiry.

Table 12: Items with facility index of below 30% in Science and Technology

Item No.	Content/skill assessed	Key	Facility index (%)
7	Identifying ways of managing e-waste in the locality.	B	22.46
8	Specifying ways of reducing water pollution.	C	29.48
11	Identifying application of change of state in everyday life.	D	22.11
13	Demonstrating ways of reducing friction in everyday life.	B	28.06
15	Identifying bodies in the sky during the day and night.	A	23.45

Table 12 presents items in Science and Technology assessment with a facility index of below 30 %.

Item 7

In this item, learners were expected to identify a type of e-waste management practised by donating a laptop to a friend who needs it instead of throwing it away. The correct response was “reusing only”. Most learners (39.91 %) picked the option of ‘reusing and recycling’ as the type of e-waste management. These learners did not realise that in recycling, the waste must undergo reprocessing.

Suggested remedy

Teachers are advised to take learners for a nature walk to a waste recycling site and study the waste management process. In addition, learners are encouraged to practise solid waste management in everyday life and watch videos of solid waste management.

Item 8

In this item, learners were asked to identify a way of controlling water pollution. The correct response was “Avoiding open defecation”. Most learners (32.40 %) picked the option of ‘Boiling’

as a way of controlling water pollution. These learners had a challenge of realising that boiling only kills germs but does not remove pollutants in water.

Suggested remedy

Teachers to guide learners to watch videos involving water pollution and how to control the pollution. Teachers should also engage learners in science projects involving control of water pollution.

Item 11

Learners were expected to identify an application of change of state of matter in everyday life. The correct response was “Drying of clothes” . A majority of learners (31.52 %) picked the option of ‘working of thermometers’ as an application of change of state. These learners had a challenge in differentiating between change of state of matter and expansion of matter.

Suggested remedy

Teachers to guide learners in critical observation of areas of application of change of state in their environment as well as watching videos on change of state of matter. Learners should also perform simple experiments involving change of state of matter.

Item 13

In this item, learners were expected to identify an activity that can not be used to reduce friction in solids. The correct response was “Sharpening tools”. Most learners (33.55%) chose the option “Lubrication”. These learners failed to realise that lubrication reduces friction. This indicates that learners had not internalised the concept of friction and how it can be reduced in daily life.

Suggested remedy

Teachers should take learners for a nature walk to identify practical examples of how friction in solids can be reduced. In addition, learners should perform class experiments involving solid friction for better conceptualisation.

Item 15

In this item, learners were expected to identify a cloud in the sky which appeared curled, feather like and light. The correct option was “Cirrus”. Most learners (27.04 %) picked the option of ‘nimbus’. They could have chosen nimbus because it is a common cloud given that it is capable of producing rain.

Suggested remedy

Teaching to include learners’ practical observation of the sky to draw logical observation of clouds’ characteristics.

Teachers to guide learners to use visual aids and digital devices to observe and identify types of clouds especially in regions where not all types of clouds are available in the sky.

2.4.5 Agriculture

The Agriculture assessment had 10 multiple choice items. The items were based on Conserving our Environment, Domestic animals and Gardening. The Upper Primary learning outcomes provide that by the end of the upper primary the learner should be able to:

- participate actively in agricultural activities for environmental conservation;
- use scarce agricultural resources through innovative practices to contribute towards nutrition and food security;
- rear small domestic animals as profitable agricultural enterprise for self-sustainability and economic development;
- apply technological skills, digital and media resources to enhance sustainable agricultural practices; and
- appreciate agriculture as a worthy niche for hobby, career development, further education and training.

Table 13 presents items in Agriculture with a facility index of less than 30 %.

Table 13: Items with facility index of below 30% in Agriculture

Item No.	Content/skill assessed	Key	Facility index (%)
16	Soil erosion control methods	C	14.09
22	Damage caused by wild animals	C	28.14

Item 16

The item required learners to identify a terrace as a structure for controlling soil erosion. The correct response was “Constructing a shade”. A large proportion (35.54%) of learners chose the option “Trash line”. This response pattern could imply that learners were not aware of the methods and structures used to control soil erosion.

Suggested remedy

Specific soil control methods and structures should be emphasized during learning. Teachers should engage learners in controlling soil erosion using the specified methods and structures. Site visits and the use of electronic media can also be explored to make the learners understand how the methods or the structures work to control soil erosion.

Item 22

The item required learners to identify a wild animal that interferes with germination of seeds. The correct response was “squirrel”. A slightly larger proportion (28.61%) of the learners selected “Moles”. This response pattern could imply that learners are not able to relate wild animals to the specific damage they cause and the control measures to put in place.

Suggested remedy

Teachers should emphasize the specific damage related to each of the wild animals studied and the appropriate control measures to put in place.

This can be done using site visits to observe the damage, use of video clips showing the wild animals causing the damage, pictures and other electronic media.

2.4.6 Home Science

The Home Science assessment had 10 multiple choice items which were based on Healthy Living; Consumer Education; Foods and Nutrition; Clothing; and Laundry work. These items required learners to: promote healthy living practices; promote proper growth and development; preserve food using traditional and modern methods; choose, use and care for clothes; make simple needlework items; and use resources appropriately.

The Upper Primary learning outcomes provide that by the end of the upper primary the learner should be able to:

- promote healthy living practices for the well-being of self and others;
- appreciate the needs of a child in promoting proper growth and development;
- preserve food using traditional and modern methods;
- choose, use and care for clothes and household articles in school and at home;
- make simple needlework items for enjoyment and entrepreneurial competences; and
- use resources appropriately at home and in school.

Table 14 presents items that recorded a facility index below 30%.

Table 14: Items with facility index of below 30% in Home Science

Item No.	Content/skill assessed	Key	Facility index (%)
32	Ability to identify eating habits that can lead to the development of scurvy.	A	24.98
35	Ability to identify the laundry substance to add to a dress to prevent it from clinging to the body while wearing it.	D	25.68

Item 32

The item required learners to identify eating habits that can lead to the development of scurvy. 24.98% of the learners chose the correct response which was decreased consumption of fruits and vegetables. A slightly larger proportion (25.23%) of the learners chose the incorrect response which was decreased consumption of foods rich in carbohydrates. This indicates that many learners did not grasp the concept of nutritional deficiencies and disorders. Further, the learners did not understand the importance of various nutrients in the body and therefore could not relate those nutrients to deficiencies and disorders.

Suggested remedy

Teachers should expose learners to learning experiences that enable them to understand causes of nutritional deficiencies and disorders. Teachers should also facilitate learners to connect the relationship between the various food nutrients and malnutrition.

Item 35

The item required learners to identify the laundry substance added to a garment that clings to the body while wearing in order to prevent it from clinging. The correct response which was the use of a fabric conditioner when rinsing was chosen by 25.68% of the learners. Majority (33.68%) of the learners chose a wrong response which was to rinse the dress well with clean water.

The choice of incorrect responses in the item could be attributed to the learner's inability to

understand the special treatments carried out during laundry work.

Suggested remedy

Teachers should expose learners to practical experiences when teaching laundry work. Teachers also guide learners to acquire test taking techniques that enable them to understand demands of various tasks.

2.4.7 Physical and Health Education

The Physical and Health Education assessment consisted of 15 multiple choice items which were based on Ball Games, Athletics, Rope work, First aid in sports, Health and physical fitness, Gymnastics and Outdoor recreational activities.

The Upper Primary learning outcomes provide that by the end of the upper primary the learner should be able to:

- perform physical and health activities for enjoyment, survival and self-actualization;
- utilise knowledge, skills and values acquired through involvement in Physical and Health Education for safety;
- apply knowledge of health and skill fitness principles to make responsible and informed choices for a functional life;
- improvise a variety of play equipment and use tactical and social skills in outdoor experiences for existence and personal development;
- exhibit inter and intra personal responsible social behaviours that respect self and others in social settings; and Table 15 presents items that recorded a facility index of below 30%.

Table 15: Items with facility index of below 30% in Physical and Health Education

Item No.	Content/skill assessed	Key	Facility index (%)
43	Games and sport (Athletics) - Improvising a relay baton.	C	25.89
46	First Aid in sports - Control of nose bleeding.	C	24.23

Item 43

The item was derived from Games and sport (Athletics) where learners were required to select the material that could be used to make the most durable relay baton. The correct response was option C (Wood), an option that was chosen by 25.89 % of learners. However, 49.19 % of learners chose option A (Manilla Paper) that was incorrect. Manilla paper is not as durable as wood. Perhaps most learners were not conversant with the relay baton, making the concept unfamiliar to them hence inability to select the most appropriate material. Learners chose option A possibly because Manilla papers are common resources in their learning environment and having not been exposed to the concept and practical experiences that involve relay baton, they could not choose the appropriate material.

Suggested remedy

Learners need to be exposed to the concept of relay races in which relay batons are exchanged. They should also be involved in improvisation of relay batons either individually or in groups. Most importantly, learners should be encouraged and guided to participate in practical experiences of relay racing to fully internalize the concepts.

Item 46

The item was derived from First Aid in games and sports, the sub strand of common injuries in sports where learners were required to choose the appropriate procedure for managing nose bleeding. The correct response of the item was at C (sitting while leaning forward and pinching the soft part of the nose). This correct option (C) was chosen by 24.23% of learners while 32.68% of learners chose Option (A) which indicated that nose bleeding is controlled by lying on the back

while facing up. This wrong option was chosen by a high percentage of learners because they literally thought that lying on the back would stop the bleeding, however this is not an appropriate procedure since the blood flows back to the mouth and the casualty risks swallowing blood or choking. It is possible that learners have not been exposed to this concept and that they chose the response from their own reasoning.

Suggested remedy

Learners need to be exposed to first aid management procedures for common sports related injuries and nose bleeding using appropriate explanations, videos, demonstrations, and drills.

2.4.8 Art and Craft

The Art and Craft assessment comprised 10 Multiple choice items drawn from four strands: Picture making, Design, Mixed media and Technology, Indigenous Kenyan crafts, Presentation and Exhibition.

The Upper Primary learning outcomes provide that by the end of the upper primary the learner should be able to:

- a) express feelings, ideas, emotions and experiences through picture making activities for self-expression;
- b) appreciate and apply creative techniques used in indigenous Kenyan Crafts within their social context and cultures;
- c) apply environmental conservation values of re-use and recycle of materials for creative purposes;
- d) create artworks to share their ideas, thoughts, feelings and experiences for learning and enjoyment;

- e) use technology as a learning tool to explore creative ideas in the process of making art work;
 - f) develop self-confidence and sense of achievement through making and responding to artworks of self and others;
 - g) apply appropriate presentation and exhibition skills in enhancement of their 2D and 3D artworks; and
 - h) apply environmental conservation measures through reuse and recycling of materials to make artworks.
- iv. digital tools and software that can enhance picture making and mixed media projects.
 - v. foster a creative and open environment where they can experiment and take risks, promote innovation, and help each discover their unique artistic voice.
 - vi. collaborative projects that contribute to community events or reflect local themes.
 - vii. critiquing to understand their strengths and areas of improvement and to foster growth in their artistic skills.

The items required learners to apply, analyse, synthesize and evaluate information. Learners were also expected to describe a still life composition and to draw it, with an emphasis on elements and principles applicable to drawing (*space, placement, and proportion*). In addition, learners were expected to demonstrate their ability to create diverse indigenous Kenyan crafts using a variety of techniques and processes. In order to exhibit financial literacy, learners were also required to describe suitable marketing techniques.

The assessment did not have any of the questions, with a facility index of less than 30% an indication that the items were appropriately constructed. For further improvement in performance, it is suggested that teachers should expose learners to:

- i. different approaches of drawing, to enable them to achieve a balanced arrangement of their compositions.
- ii. hands-on projects that allow them to explore and experiment with various materials and techniques to enhance their creativity and problem-solving skills.
- iii. local artists or experts in indigenous crafts to share their experiences with the learners.

2.4.9 Music

The Music assessment had 10 multiple choice items based on Performing, Creating, Listening and Responding.

The Upper Primary learning outcomes provide that by the end of the upper primary the learner should be able to:

- a) sing alone and with others different genres of music to promote diverse cultural knowledge and expression;
- b) create rhythms and melodies within specified guidelines for enjoyment;
- c) play instruments alone and with others for individual development, self-fulfilment and enjoyment;
- d) use locally available materials to make instruments and costumes for use in music making;
- e) perform Kenyan folk songs and dances for self and cultural expression;
- f) evaluate Music and Music performances to make meaningful connections to creating, performing and responding to Music.

Table 16 presents items that recorded a facility index below 30%.

Table 16: Items with facility index of below 30%

Item No.	Content/skill assessed	Key	Facility index (%)
16	Ability to fit a given text to a rhythm in note values.	D	22.69
18	Demonstrating knowledge of hygiene practices to be observed when handling descant recorder.	B	29.24
20	Analytical knowledge of similarities and differences between a lyre and a drum.	B	24.25

Item 16

This item tested the learners' creative ability in syllabic division and rhythm. They were provided with a Swahili phrase '*Njoo twende uwanjani*' and were expected to select the rhythm that best fitted the speech rhythm of the text provided. The correct response was option D which best fits the text to the music notes provided. A higher proportion of learners (32.07%) selected option C which is not appropriate for the speech rhythm of the given text. This points out that learners lack practical experience on rhythmic practice.

Suggested remedy

Rhythmic awareness is one of the critical musical skills that need to be developed in learners from their formative stages. Rhythm should be introduced to learners in the simplest form and developed gradually through the different grades as presented in the curriculum designs. This skill is acquired through regular meaningful and consistent practice.

Item 18

This item presented learners with a list of practices observed when handling a musical instrument. The practices were then grouped into sets of options. The learner was then required to identify the set that represented hygiene practices

observed when handling the descant recorder. Of the six practices, (ii) was not a hygiene practice. The correct option therefore was B, which did not include practice (ii) in the set. This required the learner to have practically handled the descant recorder to identify this.

Suggested remedy

A descant recorder is prescribed for practical musicianship as a western musical instrument in the primary school curriculum. Learners are expected to handle and play the instruments as guided in the curriculum. However, the majority of learners across have no access to this instrument. Provision of this instrument as part of curriculum materials is of critical importance towards achievement of the specific learning outcomes in this sub strand.

Item 20

This item presented learners with diagrams of two Kenyan indigenous instruments. The candidates were expected to study the two instruments and identify the statement that was true about the two instruments. This required candidates to have knowledge of the two instruments and demonstrate their analytical ability in telling the similarities and differences between the two. The

correct option was B, which had the modes of how the two instruments are tuned correctly presented. An alarmingly large proportion of the learners (41.01%) went for option A in which the mode of playing the first instrument was incorrect. This indicates that learners have no adequate interaction with these instruments and do not know how they are played and tuned.

Suggested remedy

Adequate coverage of curriculum content from the earlier grades is of paramount importance to ensure that learners can effectively demonstrate the skills acquired. Where it is not possible to access the actual instruments for illustration, teachers should explore online platforms for audio-visual illustrations and use them to facilitate learning.

2.4.10 Social Studies

The Social Studies assessment had 15 multiple choice items based on natural and built environments; people, population and social organisations; resources and economic activities and political systems and governance.

The Upper Primary learning outcomes provide that by the end of the upper primary the learner should be able to:

- a) understand, use and manage the immediate environment for individual and national development;
- b) understand and respect our own and other people's culture for sustainable social interactions;
- c) respect and appreciate human diversity to promote social cohesion and integration, understand and appreciate human rights and civic responsibility for attainment of social justice;

- d) apply acquired competencies in solving environmental challenges for sustainable development;
- e) acquire knowledge of and show appreciation for the historical background of our communities for personal identity;
- f) understand the system of governance in Kenya and be willing to participate in its processes.

Out of the 15 items tested, none recorded a facility index of below 30%.

Learners were expected to use the immediate environment to identify weather elements, relief features, locate tropical rainforest, give compass direction, characteristics of semi desert climate and locate national parks in Kenya. In addition they were expected to demonstrate understanding and respect of own culture by correctly identifying the apprenticeship method of learning used in traditional African societies, respect and appreciate human diversity to promote social cohesion and social justice by correctly identifying the functions of children's government.

Learners were also required to apply acquired competencies to identify suitable means of transport to use in a national park and collect appropriate samples of natural resources. Further they were to demonstrate understanding of the historical background of our communities by correctly identifying language groups belonging to the Nilotic community and demonstrate understanding of the system of governance in Kenya by identifying a symbol of national unity.

The following suggestions may help to further improve performance:

- i. Teachers are encouraged to use diagrams to illustrate relief features and engage learners in drawing them for better mastery of concepts.

- ii. There is a need to expose learners to real life experiences through educational tours/field visits to make learning about the subject more practical.
- iii. Teachers are encouraged to engage learners in observing and describing weather elements for in-depth understanding.
- iv. The use of pictures, maps, charts, and video clips to illustrate types/distribution of vegetation and climates will help improve retention of learned concepts.

2.4.11 Christian Religious Education

Christian Religious Education assessment had a total of 15 multiple choice items based on creation, Bible, the life of Jesus Christ, the Church, and Christian living.

The Upper Primary learning outcomes provide that by the end of the upper primary the learner should be able to:

- (a) demonstrate an awareness of God as the sole Creator by protecting, preserving and conserving the environment;
- (b) recognize the Bible and apply its teachings for responsible living;
- (c) apply the teachings of Jesus Christ in his/her interactions with others to form harmonious relationships;
- (d) practice Christian values in order to make informed moral decisions and choices relevant to social-economic, technological, environmental, and political issues;

- (e) apply moral teachings in the use of digital devices and social media platforms for well being of self and others; and
- (f) appreciate God's revelation to humankind so as to respond in faith by fostering peaceful co-existence and good relationships. Table 17 presents items that recorded a facility index below 30%.

Item 40

The correct response was A (Hebrews, Jude, Romans). The proportion of learners that selected the correct response was 24.50%. It was noted that a substantial proportion (41.66%) selected option B (Hosea, Luke, Mark). This implies that learners were unable to differentiate between the books in the Old Testament and those found in the New Testament.

Suggested remedy

Teachers should guide learners to use diverse methods to categorize books of the Bible such as the use of acronyms, abbreviations, and letter patterns.

2.4.12 Islamic Religious Education

The Islamic Religious Education assessment had 15 multiple choice items. The items were based on Quran, Hadith, Pillars of Iman, Devotional Acts, Akhlaq, Muamalat and History of Islam.

The development of the assessment was guided by the following learning outcomes which provided that by the end of the upper primary level, the learner should be able to:

Table 17: Items with facility index of below 30%

Item No.	Content/skill assessed	Key	Facility index (%)
40	Categorizing the books of the Bible into the New Testament only.	A	24.50

Table 18: Items with facility index of below 30% in IRE

Item No.	Content/skill assessed	Key	Facility index (%)
40	Practising responsible living according to the Hadith of the Prophet (P.b.u.h)	D	29.82
49	Applying teachings from the history of the Prophet (P.b.u.h)	B	29.37

- a) recites, read and write the selected *surah* to enhance interaction with the Qur'an as a primary source of guidance;
- b) deduce lessons from the selected *surah* and apply them in daily life;
- c) appreciate and emulate the practices of the Prophet (P.b.u.h) as the best role model;
- d) develop awareness and appreciation of Pillars of Iman as the foundation of Islam;
- e) demonstrate interest in and positive attitude towards performance of acts of *Ibadah* (worship) appropriately;
- f) acquire Islamic values to grow as a responsible and ethical citizen; and
- g) Appreciate Islamic history as a basis for culture and civilization for peaceful coexistence.

Table 18 presents items in IRE with a facility index of less than 30%.

Item 40

Question 40 assessed the learner's ability to apply Hadith. The question required learners to demonstrate how they can live responsibly according to the teachings of the Hadith of the Prophet (P.b.u.h). The correct option was sharing what they learned in school with their friends in madrasa. A higher percentage of learners (35.20 %) chose the option which was assisting other

learners when they have problems. This could be attributed to the inability of learners to meet the demand of the question where they were required to link the practices to the teachings of the Hadith of the Prophet (P.b.u.h).

Suggested remedy

Teachers should guide learners on how to answer questions that require application of knowledge and skills acquired in the classroom context. For instance, learners should be guided to respond to questions on Hadith by relating the expected practices to the teachings of the Prophet (P.b.u.h)

Item 49

Item 49 assessed application of the teachings from the history of the Prophet (P.b.u.h). Learners were required to give lessons from the experience of the Prophet (P.b.u.h) during the first revelation. The correct response was to Pray to Allah. A high percentage of learners, (41.43 %) chose the response Trust in Allah, which was incorrect. This could be a pointer to the learners' lack of correct understanding of all the events in the History of Islam.

Suggested remedy

Teachers should guide learners on deducing lessons from historical events. They should involve parents to assist in instilling the basic teachings at home since the basics of religion starts from home.

2.4.13 Hindu Religious Education.

The assessment had 15 multiple choice items based on Creation, Enlightened Beings, Scriptures, Worship, Principle of *Dharma* and *Utsav*.

The Upper Primary learning outcomes provide that by the end of the upper primary the learner should be able to:

- Understand creation as taught in the four faiths and develop a sense of belonging to a common humanity.
- Develop and apply spiritual and moral values in daily life and follow the teachings of Enlightened Beings for righteous living and appreciate the teachings of Scriptures for spiritual growth.
- Develop desired knowledge, skills, attitudes and values to acknowledge and care for people, environment, animals, birds and adopt sustainable consumption habits for harmonious living.
- Develop and apply spiritual and moral values in daily life and follow the teachings of Enlightened Beings for righteous living and appreciate the teachings of Scriptures for spiritual growth.
- Recognize and embrace key features in places of worship, their importance for understanding and exhibit responsible

participation in the celebration of *Utsav* (festivals) for righteous living.

Out of the 15 items assessed, 3 had a facility index of below 30 %.The items were from Scripture, Principle of *Dharma* and *Utsav*. Table 18 presents items with a facility index of less than 30%.

Table 19 presents items that recorded a facility index below 30%.

Item 41

Item 41 assessed learners' basic knowledge on the four faiths . The learners were expected to explain why the scripture was written in *sanskrit*. The correct response was that in translating into vernacular, the inner meaning is lost. However, the highest percentage (42.20%) of learners selected the option that will motivate people to learn *sanskrit*. This implied that the learners had limited understanding of the other faiths. Many learners might not have encountered the concept of *sanskrit*.

Suggested remedy

Learners should adequately be exposed to the basic concepts in all the four faiths apart from those they are practising. This will only be realised if KICD and MOE come in to help print HRE books as well as employ enough teachers to effectively teach the subject.

Table 19: Items with facility index of below 30%

Item No.	Content/skill assessed	Key	Facility index (%)
41	Explaining the reason why the scripture is recited in <i>sanskrit</i> .	A	9.09
44	Demonstrating the Principle of <i>Dharma</i> in day today life in the four faiths in HRE	B	27.27
49.	Identifying two <i>utsavs</i> that celebrate victory of good over evil.	C	20.51

Item 44.

Item 44 assessed the learners ability to identify the principle that can be put into practise for learners to pass examinations. The correct option was *purushartha*. The proportion of the learners that selected the option was 27.27%. but the majority of learners (30.30%) chose the response *pranidaya*. This can be attributed to lack of consistency in the application of the principles in day to day life.

Suggested remedy

There is need for the learners to be actively involved in identifying these principles and relating them to daily aspects of life. The modes of classroom assessment should expose the learners to the reality of life and encourage them to apply the acquired knowledge in their daily context.

Item 49

Item 49 assessed learners' knowledge on *Utsavs*. The learners were expected to identify the *Utsav* that celebrates the victory of good over evil. *Navrati* and *Janamashtami* attracted a higher percentage (25.64) than the correct option which was *Diwali* and *Holi* (20.51). Learners were not able to identify the *Utsavs* that celebrate victory of good over evil. The learners are not actively involved in the celebration of *Utsavs* from other faiths.

Suggested remedy

Teacher to guide the learners to take part in *Utsavs* that are being celebrated in their communities. The tasks should be practical in nature and relate to real life situations to enable learners to develop higher order thinking skills.

They need to be exposed to the *utsavs* through adopting the suggested learning experiences that are practical in their contexts.

2.4.14 Kenyan Sign Language

The Kenyan Sign Language paper comprised 30 multiple choice items that covered the receptive and expressive skills stipulated in the curriculum design.

The Upper Primary learning outcomes provide that by the end of the upper primary the learner should be able to:

- a) Demonstrate basic receptive and expressive signing skills as they use the pictorial information given on wildlife, construction site, food, market scene to respond to items based on them;
- b) Communicate fluently using appropriate receptive and expressive skills (non-manual features) in a variety of linguistic contexts such as the construction of correct KSL sentences, interpretation of a graphic based on a given sign;
- c) Demonstrate appropriate etiquette in social interactions as they make inferences based on the pictorial context given;
- d) Apply creativity and critical thinking skills in problem solving as they interpret the spatial information given to answer questions based on it.
- e) Practice hygiene, nutrition, sanitation, and safety skills to promote health and wellbeing as they draw basic conclusions from information given in a pictorial context;
- f) Apply digital literacy skills for learning and enjoyment as they pick specific information from the picture arrangement given.

Table 20 presents items that recorded a facility index below 30%.

Items 11,13 and 15

These items tested the learners' understanding of the parameters of a sign. The correct responses for items 11,13 and 15 were D HEART, C YOUR, and B DOWN respectively. It is notable that 27.75 %, 33.98 % and 25.69 % of learners selected the incorrect response in items 11, 13 and 15 respectively. This is an indication that most learners had difficulties identifying the differences in the place of articulation, palm orientations and directions of motion. This performance may be attributed to inadequate practice by learners on the parameters for effective communication.

Suggested remedy

Learners should be engaged consistently in demonstrating the five parameters of a sign and be guided to identify each one of them correctly.

such as the Location (Place of articulation), Palm Orientation, Movement, Hand shape and non-manual markers. Allow the learners to watch videos of signers using the various parameters to expose them to appropriate use of KSL.

Items 16,17 and 18

These items tested the learners' interpretation of spatial details to enable them to make correct inferences. The correct response for items 16,17 and 18 were C TREE AREA MANY//, D PEOPLE THERE TREAT//, and B EAST/SOUTH/SOUTH EAST// respectively. It is notable that 32.34%, 44.84 % and 26.69% of learners selected the incorrect response in items 16, 17 and 18 respectively. These items required the learner to identify functions of the facility selected (Hospital) and establish relationships to enable them to provide direction correctly. This indicates lack of adequate practice in the interpretation of spatial information (maps) for specific information.

Suggested remedy

Table 20: Questions with a facility index below 30%

Item No.	Content/skill assessed	Key	Facility index (%)
11	Identifying the place of articulation of the given words.	D	22.25
13	Identifying the palm orientation of given words.	C	21.62
15	Identifying the direction of motion of hands when producing given signs.	B	25.46
16	Interpreting spatial details to make correct inferences tell function or give direction to given items.	C	22.59
17		D	17.78
18		B	22.91
21	Interpreting authentic tasks and authentic language situations in real life	C	27.49
23		B	28.90
24		C	23.74
26		A	27.69
28	Identifying KSL vocabulary and construction of sentences following KSL grammatical structures.	B	26.14
29		C	24.23
30		D	21.83

Teachers should give learners more pictorial arrangements that involve critical observation when interpreting spatial information. This will help the learner develop spatial awareness for application in expressing spatial details within a linguistic context and in context beyond the classroom.

Items 21, 23, 24 and 26

These items tested the learners' interpretation of an authentic task (a dining hall timetable). The learner was expected to study the timetable provided and use the information contained therein to pick the correct response. The correct response for items 21, 23, 24 and 26 were C FRIDAY, B WEDNESDAY, C GITHERI, and A CHANGE MORE RETURN respectively. It is notable that 29.44 %, 26.83%, 28.90% and 29.75% of learners selected the incorrect response in items 21, 23, 24 and 26 respectively.

This indicates that learning experiences in KSL are not often based on authentic tasks.

Suggested remedy

Teaching of KSL as a language should derive the learning experiences from age-appropriate experiences within the learner's environment for example reading different school schedules, play and classroom activities as stipulated in the curriculum designs.

There is also a need to emphasize critical observation of given contexts to enable the learners to interpret specific information.

Items 28, 29 and 30

These items were drawn from KSL sentence construction and vocabulary. For items 28, 29 and 30, the appropriate answers were B TODAY P.E BOY GIRL SWIM LEARN//, C DRINK, and D C-O-A-T, in that order. Remarkably, 26.14%, 31.09%, and 34.17% of learners, respectively, chose the wrong answer for items 28, 29 and 30.

The learners were not able to choose the most appropriate course of action as well as identify parts of speech, identify the sign provided, and fingerspell it. The performance indicates a lack of adequate practice in KSL vocabulary, KSL grammatical structures, and relating to the information given.

Suggested remedy

The teacher to guide the learners to practice extensively on sentence construction and parts of speech and expose them to value-based experiences. They should also be guided to identify parts of speech in KSL sentences and be given adequate practice sentences in correct KSL word order.

Chapter 3

Assessment of Core Competencies, Core Values, Pertinent and Contemporary Issues

3.1 Introduction

This chapter discusses the assessment of Core Competencies, Core Values and PCIs as anchored in the Basic Education Curriculum Framework, BECF (KICD, 2019). It presents the analysis of test items with proxy evidence on learners performance; the percentage of learners getting test items correctly and the performance level for each core competency; core value and PCIs based on the 2023 KPSEA summative assessment. The reporting is anchored on the actual tasks required of the learner rather than the context upon which the task was formulated.

3.2 Assessment of Core Competencies

Core Competencies

Competency is the ability to apply appropriate knowledge, skills, and attitudes to successfully perform a task. It requires learners to demonstrate what they can do; this could be through making something, speaking, writing, or performing, among others. The core competencies and how they were assessed are subsequently described.

The Core Competencies are seven; Communication and Collaboration, Self-efficacy, Critical Thinking and Problem Solving, Creativity and Imagination, Citizenship, Digital Literacy and Learning to Learn. The Core Values are eight, Love, Responsibility, Respect, Unity, Peace,

Patriotism, Social Justice, and Integrity. The PCIs are categorized into four broad areas; Non-Formal Programmes (NFP), Values based Education (VbE), Citizenship, and Parental Empowerment and Engagement (PE&E).

Assessment of the core competencies, core values and PCIs adopted best practices for measuring mastery of competencies as described by McClarty and Gaertner (2015) which require an explicit link between the skills assessed and the defined competencies, a demonstration that learner behaviours or thought processes in the tasks reflect the competencies, and the empirical relationship between assessment scores and outcomes.

This report, therefore, identified and analysed test items in the 2023 KPSEA that provided proxy evidence that learners had to demonstrate the competencies in arriving at an answer to the Multiple-Choice Questions (MCQs). Well-formulated MCQs assess cognitive, affective, and psychomotor domains, and can provide implicit evidence of these competencies in the learners (Gajjar, Sanju, et al., 2014; Ahmed, 2020). The test items used in reporting this assessment were selected from those that subject experts identified. The analysis shows test items per subject with examples that implicitly assessed learners' acquisition and development of core competencies, core values or PCIs.

3.2.1 Communication and Collaboration

Communication is the process of transferring information from a sender to a recipient, verbally or nonverbally. Collaboration is the process of two or more people working together to realize shared goals. Collaborative learning is, therefore, designed to help learners learn from each other. Communication includes listening, speaking, reading and writing skills.

In assessing listening skills, the assessor looked out for the learner's ability to; recall, ask questions for clarity, retell, tell purpose of communication, record important information, maintain eye contact, maintain appropriate body language (show interest by nodding or by smiling at appropriate times) or posture, listen without interrupting, pay attention to the person who is speaking.

As relates to speaking skills, the assessor looked out for the learner's ability to; speak clearly to a known person, speak clearly to individuals and small groups of known people, speak clearly to

small groups of unknown people, use appropriate tone, facial expressions and gestures, present points in a logical order, consider what the listeners already know, use appropriate language, speak engagingly using facts, take turns in conversation, be passionate/ enthusiastic, engage the audience, have clarity of speech and exude confidence.

Reading skills were assessed by the assessor looking out for the learner's ability to; summarise texts, visualise/create pictures in the mind, infer information, answer questions, and predict information.

As regards writing skills, the assessor looked out for the learner's ability to; write clearly, spell words correctly, ensure fluency in sentences, use appropriate vocabulary, and present organised work.

The competency of collaboration was assessed by the assessor looking out for the learner's ability to; behave appropriately when working with others, positively work with others, recognise, and value others' ideas, contribute to group decision-making, understand and respect diversity, support others, take responsibility to complete tasks, and be punctual and reliable.

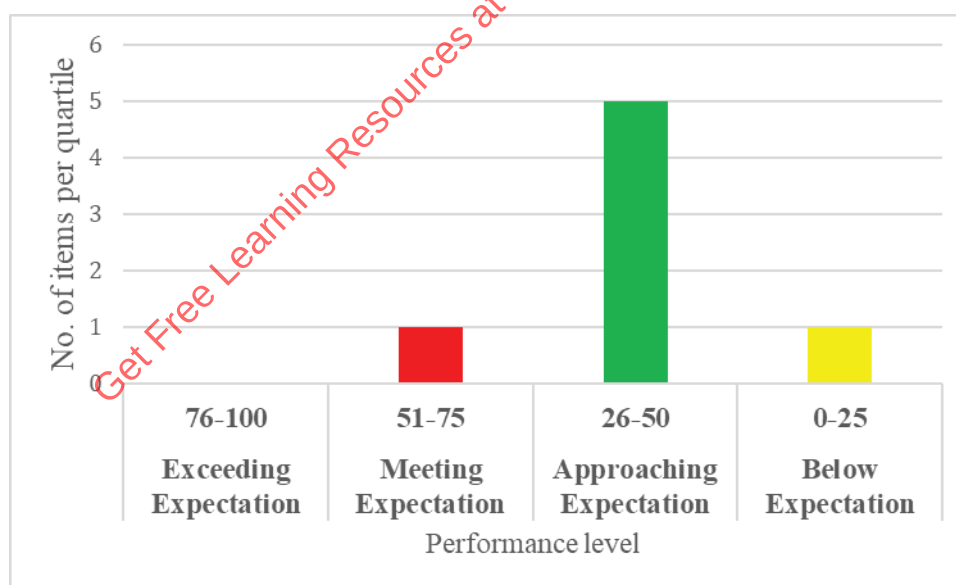
Communication and collaboration competency was assessed in various subjects as discussed below. The skills of communication assessed were listening, reading, speaking, and writing.

In English, Items 1-3 required the learners to *listen/follow a telephone conversation between a pupil and class teacher and fill in the blanks in the conversation*. This assessed the learner's ability to ensure fluency when writing sentences and have clarity of speech and telephone etiquette when engaged in a conversation.

Table 21: Performance on the Proxy Questions for Communication and Collaboration

Subject	Performance on the Proxy Questions					
English	Question Number(s)	1	2	3		
	% of learners scoring correctly	27.85%	25.33%	70.52%		
Kiswahili	Question Number(s)	1	2			
	% of learners scoring correctly	14.31%	39.21%			
Kenyan Sign Language	Question Number(s)	9	28			
	% of learners scoring correctly	33.03%	26.14%			
Performance Levels	Exceeding Expectation	Meeting Expectation		Approaching Expectation	Below Expectations	
Quartiles	76-100	51-75		26-50	0-25	
Frequency	0	1		5	1	

Figure 6: Performance on the Proxy Questions for Communication and Collaboration



Similarly, in Kiswahili, Items 1-2 required the learners to *comprehend a conversation between two people and respond to the questions*. This assessed the learner's ability to use appropriate vocabulary, infer information and answer questions and pay attention when engaged in a conversation.

In Kenyan Sign Language, Item 9 required the learners to *analyse a picture and identify the activity*. This assessed a learner's ability to take responsibility to complete tasks. Item 28 required the learners to *pick out a correct sentence*. This assessed the learner's ability to ensure fluency in sentences.

The percentages of learners who scored correctly on the proxy items on Communication and Collaboration are shown in Table 21 and Figure 6

As shown in Table 21 and Figure 6, the competency of Communication and Collaboration was assessed in three subjects namely English (3 items), Kiswahili (2 items) and Kenyan Sign Language (2 items). Most of the learners were at Approaching Expectation, while 14.3% were at Meeting Expectation and the remaining 14.3% at Below Expectation performance level. A majority of the proxy questions had a facility index of less than 30%, indicating that learners had difficulty in responding to the questions. It was observable that all the language tests had proxy items/questions on this core competency, and they gave rich contexts that enabled learners to perform the tasks that required some information on the acquisition of this core competency.

3.2.2 Self-efficacy

Self-efficacy is a person's belief about his or her capabilities to perform tasks or assignments that can change and transform lives.

In assessing the competency of self-efficacy, the assessor looked out for the learner's ability to; keep trying and stay positive when something goes wrong; keep trying when something goes wrong and think about what happened to help improve; keep trying when something goes wrong and help cheer others up, encourage others to keep trying too; look for opportunities in difficult situations; tell when others feel positive or negative and know when feeling positive or negative.

Art and Craft assessed this competency through Item 10 which required the learners to identify an *effective strategy for marketing artworks during an exhibition*. This assessed learners' ability to keep trying and look for opportunities in difficult situations.

Additionally, Item 44 under Hindu Religious Education required learners to *state how they can apply the given principles to have confidence when taking an examination*. This assessed the learner's ability to keep trying when something goes wrong and think about what happens to help improve in given tasks.

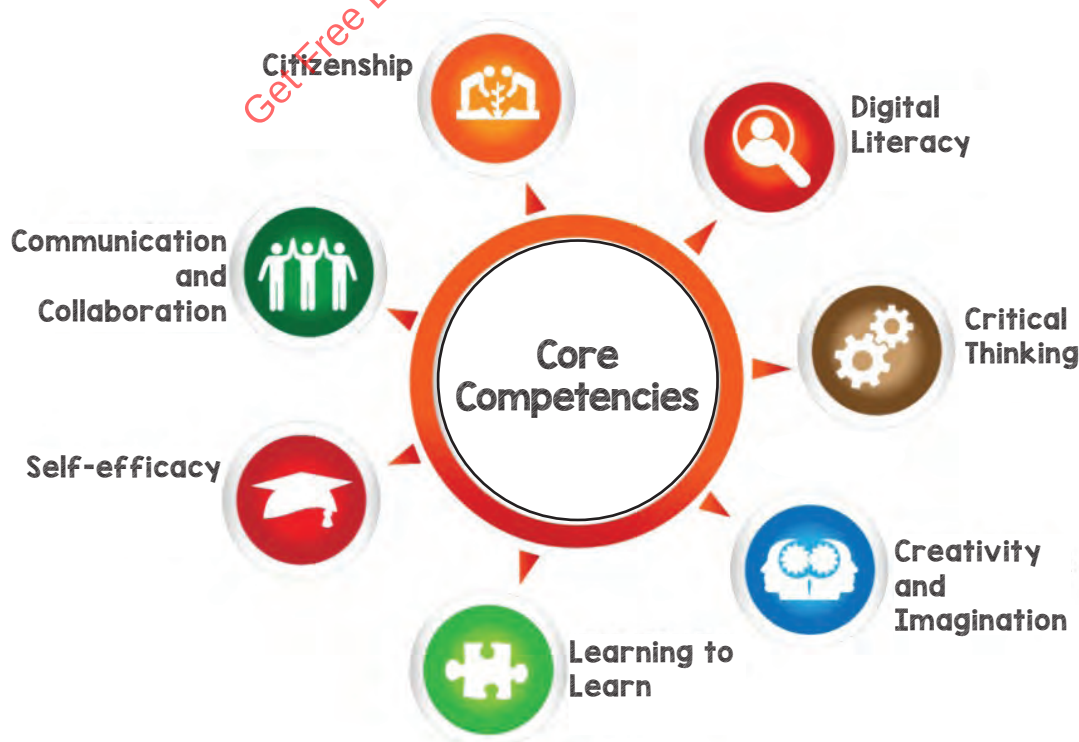
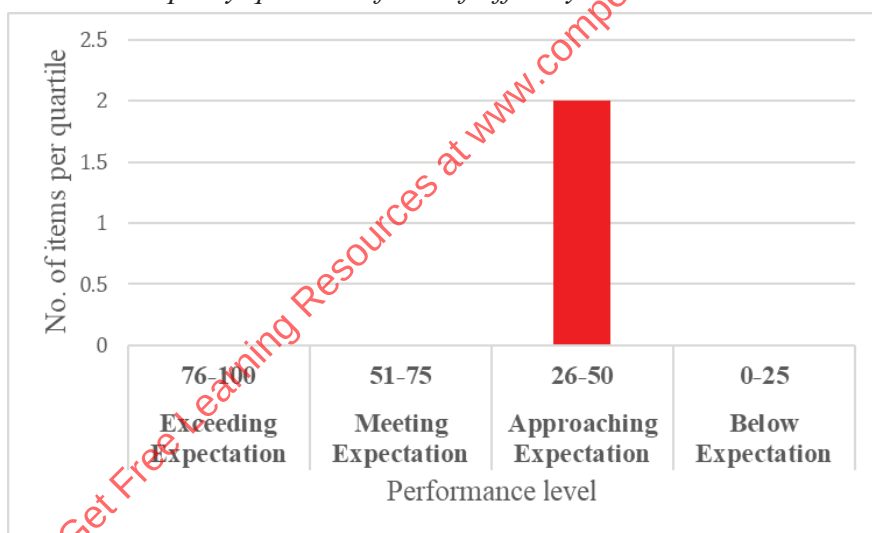


Table 22: Performance on the Proxy Questions for Self-efficacy

Subject	Performance on the Proxy Questions					
Art and Craft	Question Number(s)	10				
	% of learners scoring correct	36.63%				
Hindu Religious Education	Question Number(s)	44				
	% of learners scoring correct	27.27%				
Performance Levels	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation		
Quartiles	76-100	51-75	26-50	0-25		
Frequency	0	0	2	0		

Figure 7: Performance on the proxy questions for Self-efficacy



The percentages of learners who scored correctly on the proxy items on Self-efficacy are shown in Table 22 and Figure 7.

Table 22 shows that the Self-efficacy competency was assessed in two subjects only; Art and Craft (1 item) and Hindu Religious Education (1 item) and as depicted in Figure 7, all learners were at Approaching Expectation performance level. Creative activities give learners greater opportunities to acquire the competency of self-

efficacy as learners found it easier to correctly respond to proxy items in Art and Craft.

3.2.3 Critical Thinking and Problem Solving

Critical thinking refers to the ability to think clearly, reasoned, reflective, informed by evidence, and aimed at deciding what to believe or do (WASC Handbook 2013, p.47). This is done by defining the problem, gathering information,

sorting, organising, classifying, and analysing materials and data.

Problem-solving is the ability to identify and describe problems, generate possible solutions, evaluate, and implement the best solution. This definition is aligned to the problem-solving model by Verschaffel et al. (2020), which is strongly linked to the four basic principles of problem solving namely, understand the problem, devise a plan/translate, carry out the plan/solve and look back, that is check and interpret.

Conventionally, this competency is assessed by the assessor looking out for the learner's ability to; complete tasks by following instructions, find help if needed to complete a task, explain the problem to someone for advice if needed, find the information required to complete a task, explore different possible solutions to a problem, explore the pros and cons of the possible solutions, identify when there is no simple solution to the problem and explore complex problems by building understanding through research.

The following items assessed the competency of critical thinking and problem solving. In Mathematics, Item 7 required learners to *calculate the total fraction of salary spent on food and rent*; Item 19 required the learners to *determine time on the given clock face*; Item 26 required learners to *determine how much money they had received*

after selling tomatoes from their agricultural project. These items assessed the learner's ability to find the required information and explore possible solutions to complete given tasks.

In English, Item 9 required learners to *determine what is likely to happen if animals are not treated kindly*. This assessed the learner's ability to explore consequences of not addressing issues at hand.

In Kiswahili, Item 4 "*Leni alimweleza Kibo athari za kutotunza mazingira. Ungekuwa Kibo, ungetaja athari gani nyingine*" required learners to state other consequences for not taking care of the environment. This assessed the learner's ability to explore different possible solutions to a problem.

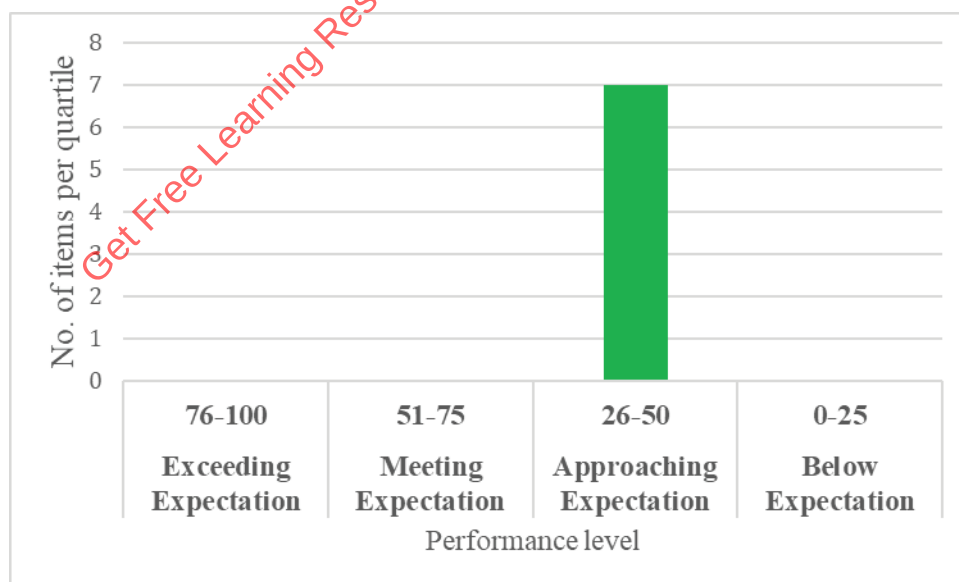
In Agriculture, Item 17 required the learner to *explain how to control soil erosion*. The item assessed learners' ability to explore possible ways of curbing soil erosion.

Social Studies also assessed this competency. In Item 21, learners were required to *select the elements of weather from groups of elements*. This assessed the learners' ability to explore the pros and cons of the possible solutions. Further, Item 26 required learners to *use the map of Kenya to locate a national park found in Mandera County*. This assessed the learner's ability to find information required to complete a task.

Table 23: Performance on the Proxy Questions for Critical Thinking and Problem Solving

Subject	Performance on the Proxy Questions					
Mathematics	Question Number(s)	7	19	26		
	% of learners scoring correctly	36.08%	42.11%	38.54%		
Kiswahili	Question Number(s)	4				
	% of learners scoring correct	46.77%				
English	Question Number(s)	9				
	% of learners scoring correctly	36.63%				
Agriculture	Question Number(s)	17				
	% of learners scoring correctly	39.12%				
Social Studies	Question Number(s)	21	26			
	% of learners scoring correctly	43.95%	30.60%			
Performance Levels	Exceeding Expectation	Meeting Expectation		Approaching Expectation	Below Expectation	
Quartiles	76-100	51-75		26-50	0-25	
Frequency	0	0		7	0	

Figure 8: Performance on the proxy questions for Critical Thinking and Problem Solving



The percentages of learners who scored correctly on the proxy items on Critical Thinking and Problem Solving are shown in Table 23 and Figure 8

It is observable from Table 23 that five subjects, that is, Mathematics (3 items), English (1 item), Kiswahili (1 item), Agriculture (1 item) and Social Studies (2 item) assessed the Critical Thinking

and Problem-Solving competency. Figure 8 shows that all learners were at Approaching Expectation performance level. It is notable that none of the items had a facility index below 30% implying that learners are able to find information required to complete a given task in a variety of subjects.

3.2.4 Creativity and Imagination

Imagination is the ability to form a mental picture of something that one has not seen or experienced while creativity is the ability to come up with new ways of solving problems or doing things. Creativity can be assessed by measuring the learner's ability to perform a standardised task such as producing a story, a drawing, a musical composition, etc., based on predetermined criteria. This type of standardised task involves the ability to put together several ideas; synthesise them, to achieve a unique, original production (Barbot, Besancon & Lubart, 2011).

In assessing this competency, the assessor looked out for the learner's ability to: imagine different situations, say what is imagined, bring

imaginations to life in different ways, generate ideas when given clear instructions, generate ideas to improve something, combine different concepts to generate ideas, use creativity in work related contexts, and use creativity in wider life.

In Physical and Health Education, Item 43 required learners to *identify suitable materials that can make a durable relay baton*. This assessed the learner's ability to generate ideas to improve something. Item 47 required learners to *state material suitable for improvising a bandage* while Item 48 required learners to *name materials used to improvise a soccer ball*. These items assessed a learner's ability to use creativity in performing given tasks.

In Art and Craft, Item 8 required learners to *describe how puppets are given character during a performance*. This assessed the learner's ability to bring imaginations to life in different ways.

The proportions of learners who scored correctly on the proxy items on Creativity and Imagination are shown in Table 24 and Figure 9.

Table 24: Performance on the Proxy Questions for Creativity and Imagination

Subject	Performance on the Proxy Questions				
Physical and Health Education	Question Number(s)	43	47	48	
	% of learners scoring correctly	25.89%	10.77%	19.01%	
Art and Craft	Question Number(s)	8			
	% of learners scoring correctly	37.30%			
Performance Levels	Exceeding Expectation	Meeting Expectation		Approaching Expectation	Below Expectation
Quartiles	76-100	51-75		26-50	0-25
Frequency	0	0		2	2

Figure 9: Performance on the proxy questions for Creativity and imagination

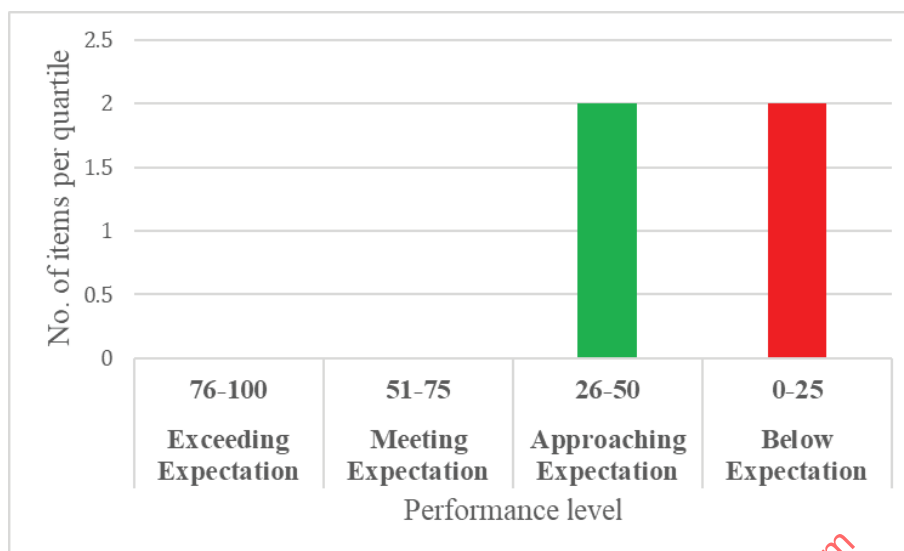


Table 24 shows the two subjects that assessed the competency of Creativity and Imagination. These were Physical and Health Education (3 items) and Art and Craft (1 item). In this competency, learners were equally apportioned at Approaching Expectation and Below Expectation as depicted in Figure 9. It is worth noting that learners had difficulty in picking the correct responses to the items, indicating limited opportunities/learning experiences that could expose them to the building blocks that enhance the acquisition of the competency of Creativity and Imagination.

3.2.5 Citizenship

Citizenship as a competency implies respectfully and positively coexisting and impacting others and being actively involved in addressing community, national and/or global issues. The challenge for Citizenship assessment is to focus not just on knowledge, but also on how well that knowledge is understood, applied, debated, and put into action outside the classroom (Carroll, Child. & Darlington, 2015).

A learner with the competency of Citizenship can: recognise own feelings about something (events, places, people, issues, among others), recognise others' feelings about something, fairly divide

up tasks with others, manage time and resources to complete tasks, manage group discussions to reach decisions, manage disagreements to reach shared solutions, and recognise own strengths and weaknesses.

This competency was assessed in the following subjects: In Science and Technology, Item 6, required learners to *identify an activity in which water is not conserved* while Item 8 required learners to *state ways to control water pollution*. These items assessed the learner's ability to manage resources.

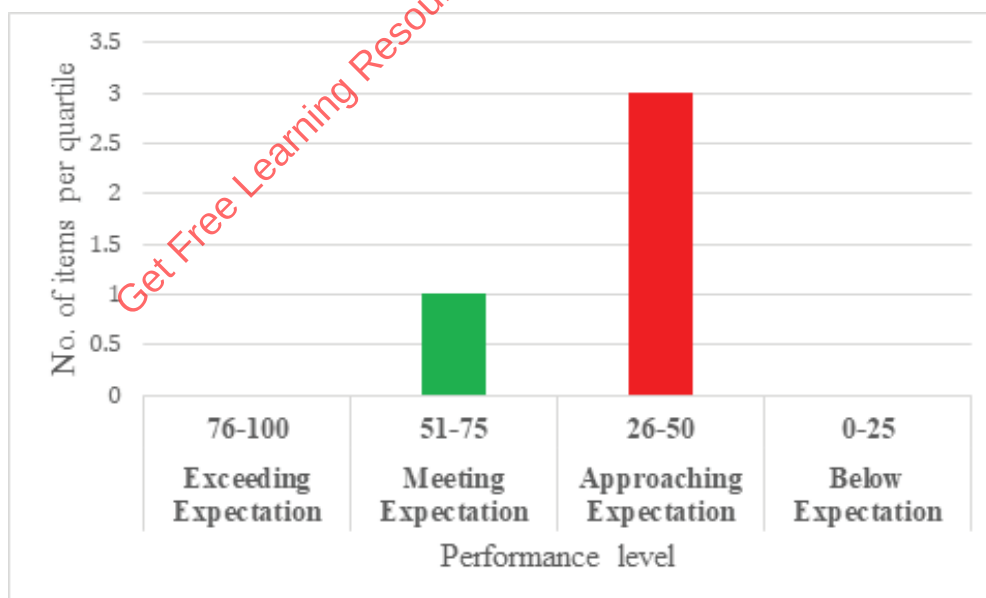
In Agriculture, Item 23 required learners to *analyse a given photograph showing a farmer in a maize farm and name the ongoing activity*. This assessed a learners' ability to explain their own feelings about the activity.

This competency was also assessed in Social Studies in Item 27 where learners were required to *identify communities that belong to the Nilotes of Kenya*. This assessed the learner's ability to be aware of different communities in Kenya.

Table 25: Performance on the Proxy Questions for Citizenship

Subject	Performance on the Proxy Questions					
Science and Technology	Question Number(s)	6	8			
	% of learners scoring correctly	56.05%	29.48%			
Agriculture	Question Number(s)	23				
	% of learners scoring correctly	45.77%				
Social Studies	Question Number(s)	27				
	% of learners scoring correctly	42.10%				
Performance Levels	Exceeding Expectation	Meeting Expectation		Approaching Expectation	Below Expectation	
Quartiles	76-100	51-75		26-50	0-25	
Frequency	0	1		3	0	

Figure 10: Performance on the proxy questions for Citizenship



The share of learners who scored correctly on the proxy items on Citizenship is shown in Table 25 and Figure 10.

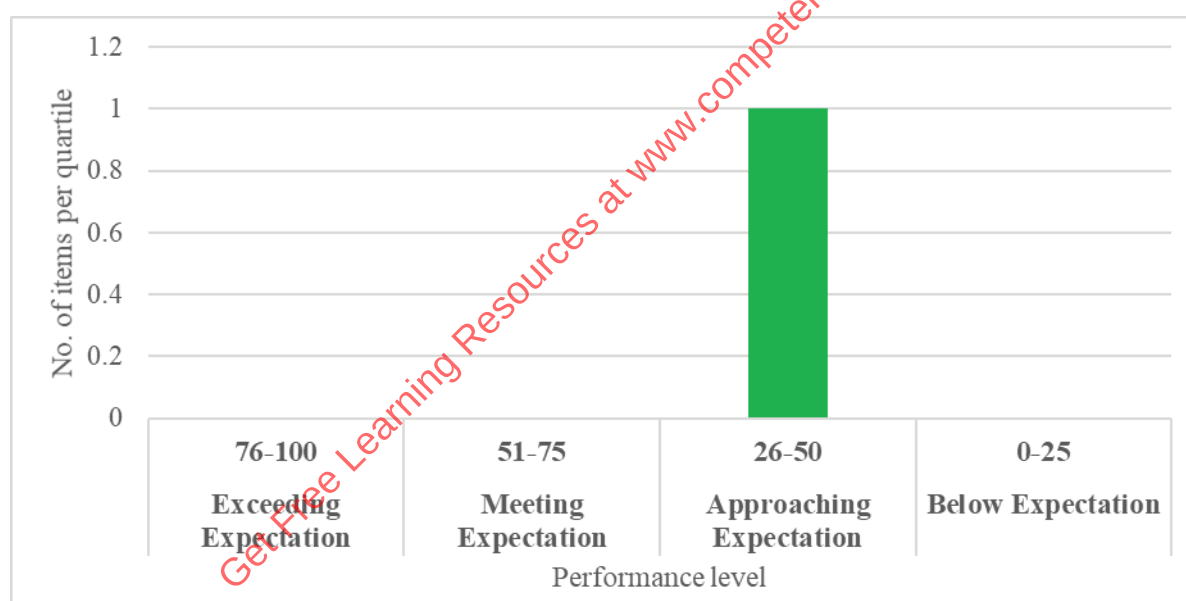
It is observable from Table 25 that Citizenship was assessed in Science and Technology (2

items), Agriculture (1 item), and Social Studies (1 item). Figure 10 reveals that three quarters of the learners were at Approaching Expectation while a quarter were at Meeting Expectation performance level.

Table 26: Performance on the Proxy Questions for Digital Literacy

Subject	Performance on the Proxy Questions					
Kenya Sign Language	Question Number(s)	10				
	% of learners scoring correctly	27.84%				
Performance Levels	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation		
Quartiles	76-100	51-75	26-50	0-25		
Frequency	0	0	1	0		

Figure 11: Performance on the proxy questions for Digital literacy



This implies that learners are acquiring the core competency and more teaching and learning of other aspects of citizenship should be reinforced.

3.2.6 Digital Literacy

Digital literacy can be described as having the knowledge, skills and behaviours that are necessary to use a wide range of digital content and devices effectively and safely. Such devices include mobile phones, smart phones, tablets, laptops, and desktops, among others.

In a review of 22 existing instruments used for assessment of digital competence in line with DigComp Framework in various European countries, Carretero, Vuorikari and Punie (2017) grouped these instruments into three major categories based on the data collection approach: performance assessment, knowledge-based assessment, and self-assessment. These approaches can be strengthened by combining them and conducting secondary data gathering

(e.g. by providing an e-portfolio that contains creative works, and other documentary evidence) (UNESCO Institute of Statistics, 2019).

Digital literacy assessment required the assessor to look out for the learner's ability to; operate digital devices; communicate and collaborate using digital devices; use the internet; play digital games; observe safety when using digital devices; take photographs and record videos; and create patterns and drawings with digital devices.

In Kenyan Sign Language, Item 10 assessed a learner's ability to use digital devices to search for information.

The proportion of learners who scored correctly on the proxy items on Digital Literacy is shown in Table 26 and Figure 11

Table 26 shows the assessment of Digital Literacy competency. From all the subjects, only Kenyan Sign Language (1 item) assessed the competency. As shown in Figure 11, all learners were at Approaching Expectation performance level. The assessment of Digital Literacy in one subject alludes to the need for more exposure of the learners to the use of digital devices to effectively acquire the required digital literacy competencies.

3.2.7 Learning to Learn

Learning to Learn is the ability to pursue and persist in learning, to organise one's own learning by the effective management of time and information, both individually and in groups. Some of the activities learners perform under this competency are displayed in Figure 12.

Teachers are encouraged to engage learners in the activities in Figure 12 to enhance the acquisition of the Learning to Learn competency.

In assessing this competency, the assessor looked out for the learner's ability to, handle new challenges positively, set own goals, set goals informed by expected requirements, order and prioritise tasks to achieve the set goals, know when something is too difficult, know what doing well looks like, work with care and attention to details, and take pride in his/her work when succeeding.

In Home Science, this competency was assessed in Item 28, where learners were required to choose a statement that was true about savings. This assessed learners' ability to know the merits of saving for the future.

In Social Studies, Item 28 required learners to infer the method of learning presented in a case where one made a pot after observing pottery making. This assessed the learners ability to learn through demonstration by paying attention to detail.

Similarly, Item 38 of Hindu Religious Education required learners to analyse a given situation. This assessed a learner's ability to pay attention to details.

The share of learners who scored correctly on the proxy items on Learning to Learn are shown in Table 27 and Figure 13.

Figure 12: Learning to learn activities

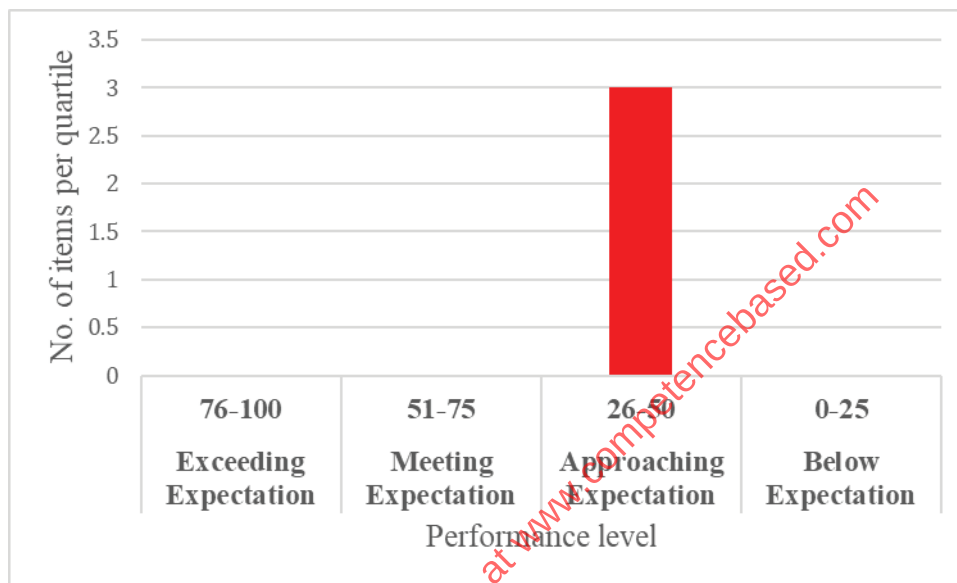


Table 27: Performance on the Proxy Questions for Learning to Learn

Subject	Performance on the Proxy Questions			
Home Science	Question Number(s)	28		
	% of learners scoring correctly	44.01%		
Social Studies	Question Number(s)	28		
	% of learners scoring correctly	39.76%		
Hindu Religious Education	Question Number(s)	38		
	% of learners scoring correctly	30.30%		

Performance Levels	Exceeding Expectation	Meeting Expectation		Below Expectation
Quartiles	76-100	51-75		0-25
Frequency	0	0		0

Figure 13: Performance on the proxy questions for Learning to Learn



Home Science (1 item), Social Studies (1 item) and Hindu Religious Education (1 item) each assessed the competency of Learning to Learn as displayed in Table 27. In terms of performance levels, all the learners were at Approaching Expectation as shown in Figure 13. This implies that teaching and learning is equipping learners with the basic building blocks for acquiring the competency of Learning to Learn.

3.3. Assessment of Core Values

Values are standards that guide an individual on how to respond or behave in each circumstance. They influence how one feels, acts, and makes choices in life. This section describes the eight core values stipulated in the CBA Framework and how they were assessed.



3.3.1 Integrity

This refers to the ability to know, defend and do what is right. It entails doing the right thing even when you can do the wrong thing. In assessing integrity, the assessor looked out for a learner's ability to; avoid conflict of interest, utilise resources sparingly, be committed to duty, display honesty, avoid breaches of confidentiality and security, act on identified corrupt deals, have self-discipline, apply laid down procedures when doing things and display transparency, fairness, and accountability.

Item 11 in English required learners to *read/follow a passage about a shopkeeper and customers and point out why the shopkeeper was surprised to see a buyer return soon*. This assessed the learner's ability to demonstrate honesty when given excess change, by returning the extra cash to the shopkeeper and being accountable for all actions and deeds.

Item 26 in Kenyan Sign Language also assessed a learner's ability to demonstrate integrity in a situation where one is given excess change by returning the extra cash.

In Social Studies, Item 30 required learners to *state what may cause one's citizenship to be cancelled*. This assessed the learner's ability to display honesty when filling out forms, apply laid down procedures when doing things and display transparency.

The share of learners who scored correctly on the proxy items on Integrity are shown in Table 28 and Figure 14.

The core value of Integrity was assessed in English (1 item) and Social Studies (1 item). Figure 14 shows that two thirds (66.7%) of the learners were at the Approaching Expectation performance level. This indicate that learners need exposure and experiences on tasks that touch on integrity in various subjects.

3.3.2 Love

This refers to the mutual expression of respect, trust, honesty, integrity, and emotional attachment. In assessing this value, the assessor looked out for the learner's ability to; portray a caring attitude, avoid inflicting pain on others, put the interest of others before their own interest, keep promises, respect others, display trustworthiness, forgive others when wronged, and resolve conflicts.

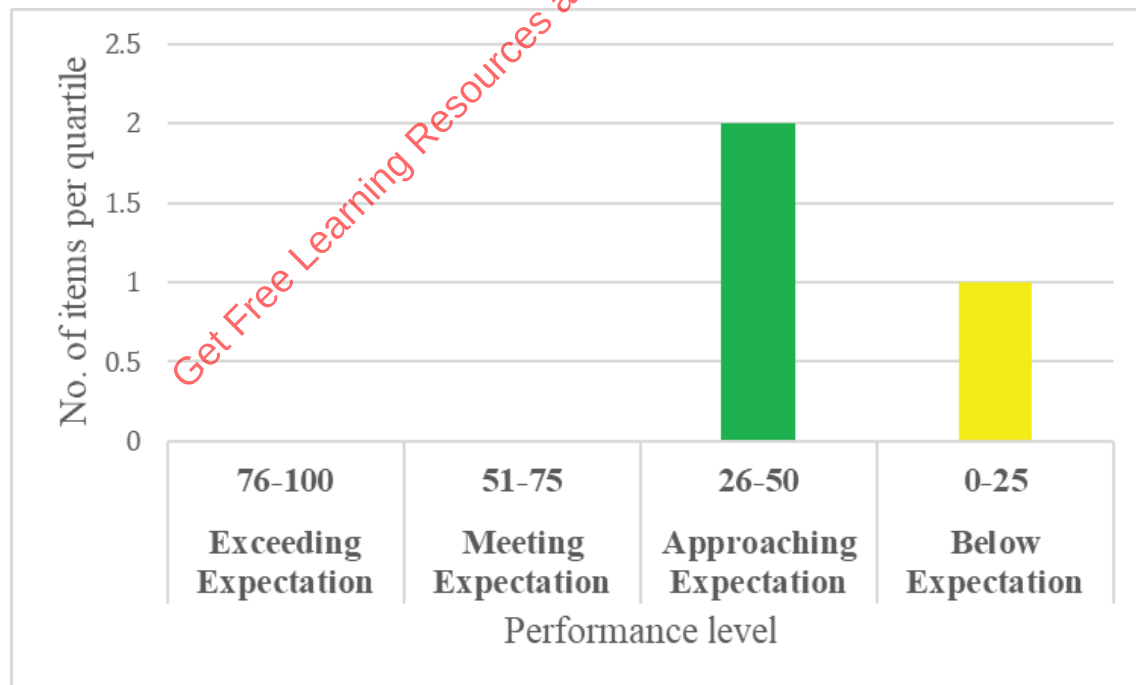
In English, item 25 required the learners to *fill in a blank space on what one should do while on a journey*. Similarly in Physical and Health Education, item 39 required learners to *state why they should share food during an outdoor activity*. These tasks assessed the learner's ability to show care and compassion and put the interests of others before their own.

In Christian Religious Education, Item 39 required learners to identify the *value learnt from the bible story on how Moses was saved by Pharaoh's daughter*. This assessed learners' ability to demonstrate acquisition of value by putting the interest of others before their own and portray a caring attitude respectively.

Table 28: Performance on the Proxy Questions for Integrity

Subject	Performance on the Proxy Questions					
English	Question Number(s)	11				
	% of learners scoring correctly	20.72%				
Kenya Sign Language	Question Number(s)	26				
	% of learners scoring correctly	27.69%				
Social Studies	Question Number(s)	30				
	% of learners scoring correctly	46.70%				
Performance Levels	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation		
Quartiles	76-100	51-75	26-50	0-25		
Frequency	0	0	2	1		

Figure 14: Performance on the proxy questions for Integrity

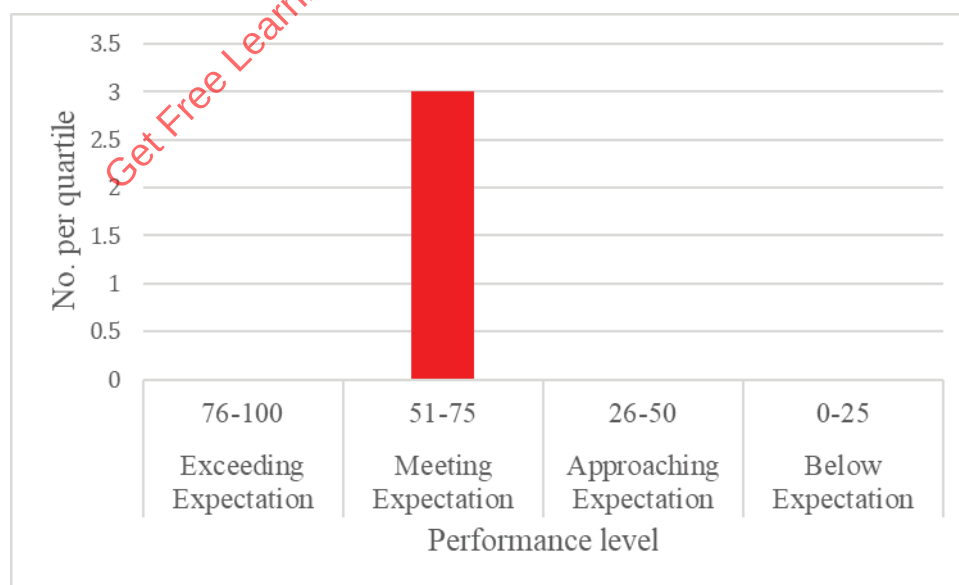


The percentages of learners who scored correctly on the proxy items on Love are shown in Table 29 and Figure 15.

Table 29: Performance on the Proxy Questions for Love

Subject	Performance on the Proxy Questions					
English	Question Number(s)	25				
	% of learners scoring correctly	58.86%				
Physical and Health Education	Question Number(s)	39				
	% of learners scoring correctly	58.01%				
Christian Religious Education	Question Number(s)	39				
	% of learners scoring correctly	51.44%				
Performance Levels	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation		
Quartiles	76-100	51-75	26-50	0-25		
Frequency	0	3	0	0		

Figure 15: Performance on the proxy questions for Love



Love was the only well performed core value. As shown in Table 29, the core value of Love was assessed in three subjects – English (1 item), Physical and Health Education (1 item) and Christian Religious Education (1 item). All learners were at Meeting Expectation performance level. It is therefore observable that learners are well versed with portraying caring attitude towards, respect for others and resolving conflicts amicably, a practise that should be maintained. Responsibility is the state of being answerable, or accountable for something within one's power, control, or management. In assessing the value of responsibility, the assessor looked out for a learners' ability to: respect other people's property, keep promise and honour commitments, offer leadership and guidance to others, not blame others, accept the consequences, care for own property and those of others, engage in assigned roles and duties, observe safety precautions, be dependable, and proactively solve problems.

In English, Item 18 required learners *to fill in the blank space in a passage on gardening at home*. This assessed the learner's ability to be responsible by caring for their gardens and offer guidance to others on how to improve.

Item 7 in Kiswahili assessed the learner's ability to keep promises and honour commitments since payment of tax is an obligation.

The item read: “*Kifungu kinaonyesha kuwa ni haki ya KRA kukusanya ushuru kwa sababu _____*”. This implores the learner to demonstrate responsibility and commitment to tax compliance.

In Physical and Health Education, Item 36 required the learners to *identify the correct set of given options on rules for racing games*. Similarly in Social Studies, Item 29 required learners to *identify functions of the children's government*. These two items assessed the learner's ability to offer leadership and guidance to others.

In Social studies, Item 34 required learners to *mention qualities of a good leader*. This assessed learners' ability to offer leadership and guidance to others, not blame others, accept the consequences be dependable, and proactively solve problems.

In Islamic Religious Education, Item 48 required learners to *identify obligations that parents' ought to fulfil towards their children*. This assessed learners' ability to have respect and proactively solve problems amicably even when their parents have challenges.

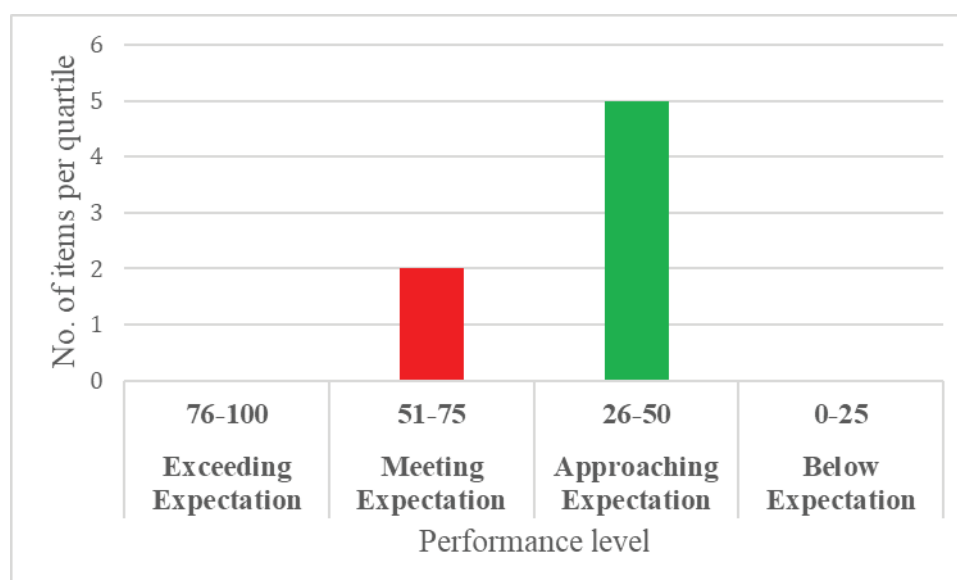
In Music, Item 15 required learners to *describe the appropriate way of handling a fiddle after a performance*. This assessed the learner's ability to care for their own and others' property.

The proportions of learners scoring correctly on the competency of Responsibility are shown in Table 30 and Figure 16.

Table 30: Performance on the Proxy Questions for Responsibility

Subject	Performance on the Proxy Questions					
English	Question Number(s)	18				
	% of learners scoring correctly	61.59%				
Kiswahili	Question Number(s)	7				
	% of learners scoring correctly	48.94%				
Physical and Health Education	Question Number(s)	36				
	% of learners scoring correctly	39.84%				
Social Studies	Question Number(s)	29	34			
	% of learners scoring correctly	37.65%	55.06%			
Islamic Religious Education	Question Number(s)	48				
	% of learners scoring correctly	45.33%				
Music	Question Number(s)	15				
	% of learners scoring correctly	37.43%				
Performance Levels	Exceeding Expectation	Meeting Expectation		Approaching Expectation	Below Expectation	
Quartiles	76-100	51-75		26-50	0-25	
Frequency	0	2		5	0	

Figure 16: Performance on the proxy questions for Responsibility



As displayed in Table 30, Responsibility was assessed in six subjects - English (1 item), Kiswahili (1 item), Physical and Health Education (1 item), Social Studies (2 items), Islamic Religious Education (1 item) and Music (1 item). Figure 16 reveals that majority of the learners were at the Approaching Expectation with the remaining 26.7% performing at the Meeting Expectation level. This indicates that there is a need to enhance instruction practices to have more learners acquiring the competence.

3.3.4 Respect

Respect is having a positive regard towards self and others without prejudice. In assessing this core value, the assessor looked out for a learner's ability to; understand and appreciate others, display humility, be patient, accommodate diverse opinions, be open minded and value human dignity.

In English, Item 2 required learners *to choose from a set of options what they would do when seeking permission from a teacher*. This assessed the learners' ability to display humility, patience and understanding the best way to communicate in each situation.

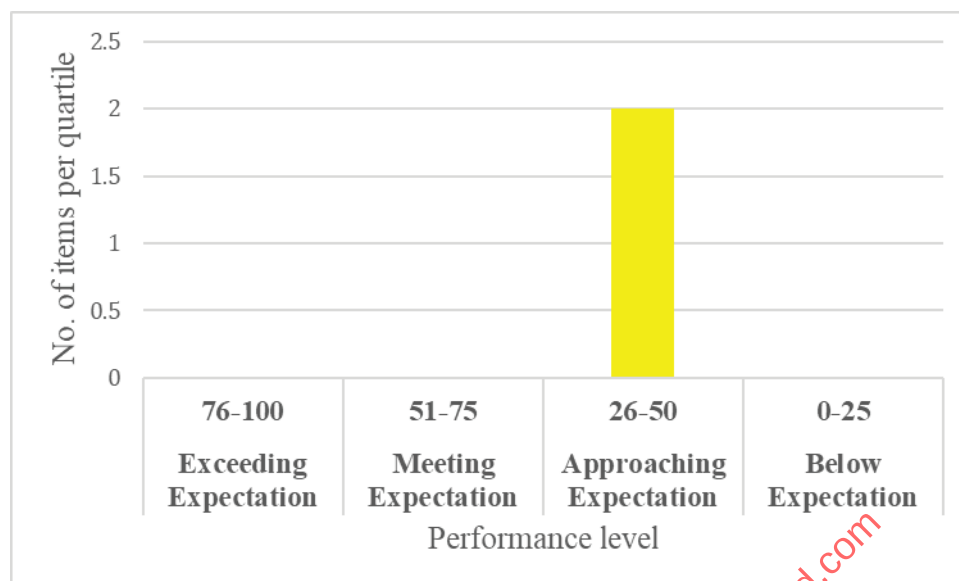
In Kenyan Sign Language, Item 3 required learners to analyse a picture depicting someone touching a shoulder of a learner with a disability (*possibly hearing impairment*). This assessed the learner's ability to value diversity and human dignity when drawing one's attention respectfully.

The percentages of learners who scored correctly on the proxy items on Respect are shown in Table 31 and Figure 17.

Table 31: Performance on the Proxy Questions for Respect

Subject	Performance on the Proxy Questions				
English	Question Number(s)	2			
	% of learners scoring correctly	25.33%			
Kenyan Sign Language	Question Number(s)	3			
	% of learners scoring correctly	31.42%			
Performance Levels	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation	
Quartiles	76-100	51-75	26-50	0-25	
Frequency	0	0	2	0	

Figure 17: Performance on the proxy questions for Respect



The core value of Respect was assessed in two subjects only. Table 31 shows the items assessed in the two subjects, English (1 item) and Kenyan Sign Language (1 item). In this competency, all learners were at Approaching Expectation performance level as shown in Figure 17. This implies that learners require more exposure to aspects that inculcate showing consideration towards one another, as outlined on the building blocks to include humility, patience, accommodating diverse opinions.

3.3.5 Unity

Unity is the ability to live together harmoniously regardless of social, cultural, racial, religious, economic, and political differences. It is the recognition of the importance of working with other people towards a common goal. In assessing unity, the assessor looked out for a learner's ability to; collaborate with others, respect other people's opinions, share available resources amicably, strive to achieve common goals, appreciate efforts of others, and take turns in activities and conversations.

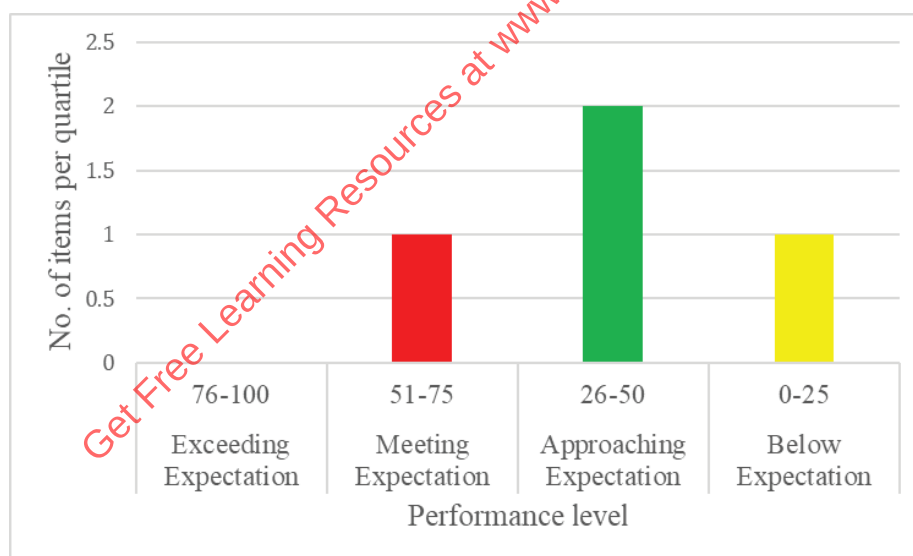
The following items assessed the competency: Item 30 in Mathematics assessed a learner's ability to share available resources amicably. The item required the learners to *determine the amount of money shared amongst members of a self-help group*. Assessment of Unity was also assessed in Social Studies Item 35, which required learners to identify symbols of national unity.

In Christian Religious Education, Item 38, required learners to *pinpoint how members of the family can help to promote unity at home*. This assessed a learner's ability to understand that collaborating with others is a way of achieving unity. Unity was also assessed in Hindu Religious Education, Item 45 which required learners to *identify the Sikh principle that guides morning chanting in a place of worship*. This assessed the learner's ability to collaborate and strive to achieve common goals. The proportions of learners who scored correctly on the proxy items on Unity are shown in Table 32 and Figure 18.

Table 32: Performance on the Proxy Questions for Unity

Subject	Performance on the Proxy Questions				
Mathematics	Question Number(s)	30			
	% of learners scoring correctly	20.52%			
Social Studies	Question Number(s)	35			
	% of learners scoring correctly	37.08%			
Christian Religious Education	Question Number(s)	38			
	% of learners scoring correctly	52.63%			
Hindu Religious Education	Question Number(s)	45			
	% of learners scoring correctly	39.39%			
Performance Levels	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation	
Quartiles	76-100	51-75	26-50	0-25	
Frequency	0	1	2	1	

Figure 18: Performance on the proxy questions for Unity



The core value of Unity was assessed in four subjects Mathematics (1 item), Social Studies (1 item), CRE (1 item) and Hindu Religious Education (1 item). In this assessment, a majority of the learners were at Approaching Expectation, with some at Meeting Expectation and Below Expectation performance levels. This shows that learners should be more engaged in activities that require them to work in groups to achieve a common goal.

3.3.6 Peace

Peace is a state of tranquillity and harmony with oneself and other people. The value of peace enables individuals to remain calm always regardless of the circumstances and resolve differences amicably.

In assessing the value of peace, the assessor looked out for a learner's ability to resolve differences amicably, respect diversity, avoid/resolve conflicts, respect self and others, avoid

hurting others, display tolerance and follow laid down procedures when carrying out activities. There were no proxy items on Peace based on the assessment. There is a need for all the core competencies to be targeted for assessment in the future.

3.3.7 Patriotism

Patriotism refers to loyalty, love and devotion for one's country or nation. Patriotic individuals are proud of their country, and readily and competently perform their duties as citizens. In assessing the value of Patriotism, the assessor looked out for a learners' ability to; be aware of

own responsibilities in society, be conscious of his/her social and moral duties, respect fellow citizens, be aware of own culture, exhibit honesty, serve the community, love own country, be ready to defend the country and obey laws and regulations.

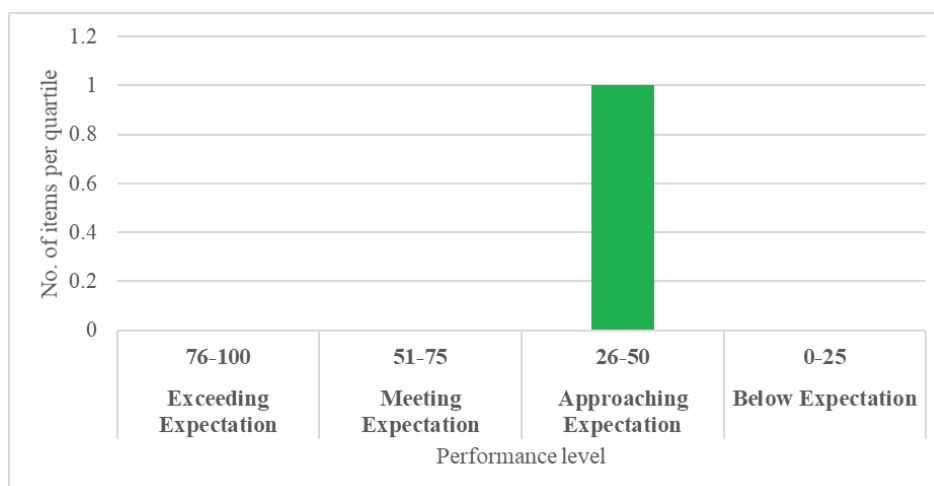
In Social Studies, Item 27 required learners to *identify communities that make up Nilotes in Kenya*. This assessed learners' ability to be aware of different cultures.

The share of learners who scored correctly on the proxy item on Unity is shown in Table 33 and Figure 19.

Table 33: Performance on the Proxy Questions for Patriotism

Subject Performance on the Proxy Questions						
Social Studies	Question Number(s)	27				
	% of learners scoring correctly	42.10%				
Performance Levels	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation		
Quartiles	76-100	51-75	26-50	0-25		
Frequency	0	0	1	0		

Figure 19: Performance on the proxy questions for Patriotism



As displayed in Table 33, Patriotism was assessed in Social Studies only (1 item). Figure 19 shows that the learners were at Approaching Expectation performance level. This alludes that there is a need for more exposure on tasks aimed at assessing aspects of Patriotism. Learners should be more engaged in activities that nurture loyalty, love and devotion towards the nation.

3.3.8 Social Justice

This value refers to fair treatment of each other and promotion of equity. It aims at creating a society that is based on the principles of respect for human dignity, equity, solidarity, and elimination of inequalities.

In assessing the value of Social Justice; the assessor looked out for a learner's ability to; be democratic, advocate for privileges without favour, advocate for harmonious relationships in society, share resources equitably, and foster fairness and justice among peers and other members of the community.

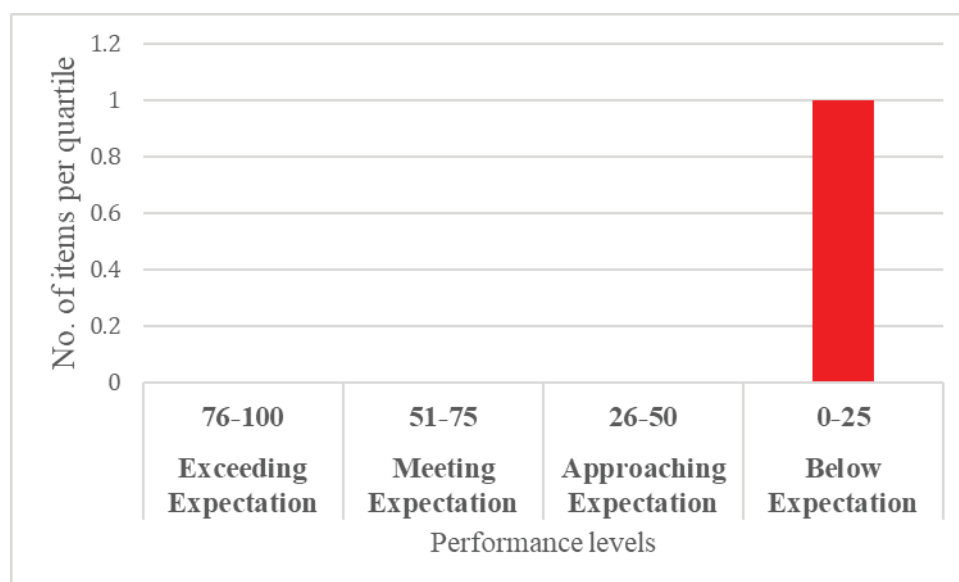
Item 30 in Mathematics assessed a learner's ability to share resources equitably. The item required the learners to *determine the amount of money shared amongst members of a self-help group*.

The share of learners who scored correctly on the proxy items on Social Justice is shown in Table 34 and Figure 2

Table 34: Performance on the Proxy Questions for Social Justice

Subject	Performance on the Proxy Questions				
Mathematics	Question Number(s)	30			
	% of learners scoring correctly	19.33%			
Performance Levels	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation	
Quartiles	76-100	51-75	26-50	0-25	
Frequency	0	0	0	1	

Figure 20: Performance on the proxy questions for Social Justice



From the findings in Table 34 and Figure 20, it is worth noting that the core value of Social Justice was assessed in Mathematics only (1 item) and all learners were at Below Expectation performance level. There is need to develop more items assessing this competency and teachers to focus more on learning opportunities that expose learners to aspects of fairness and sharing of resources equitably.

3.4 Assessment of Pertinent and Contemporary Issues

Pertinent and Contemporary Issues (PCIs) are problems currently affecting people or places and are unresolved. In assessing the PCIs, the assessor looked out for a learner's ability to; identify current issues/problems facing their community, protect themselves against the issues affecting the community, and prevent/control spread of the problem. The following is a description of the six broad areas of PCIs and how they were assessed.

3.4.1 Global Citizenship

Global Citizenship Education (GCE) focuses on developing curious, open- and internationally minded children who are aware that we are all

interconnected, have the value that we are all equal, and teach children to treat people with respect (Werven, Coelen. Jansen & Hofman, 2023). Global citizenship seeks to develop a sense of belonging to a broader community and common humanity (UNESCO, 2015). It aims at building the knowledge, skills, values, and attitudes that learners need to contribute to an inclusive, just, and peaceful global society. The PCIs under Global Citizenship include *peace education, integrity, ethnic and racial relations, social cohesion, patriotism and good governance, human rights and responsibilities, child's rights, childcare and protection, and gender issues in education, among others.*

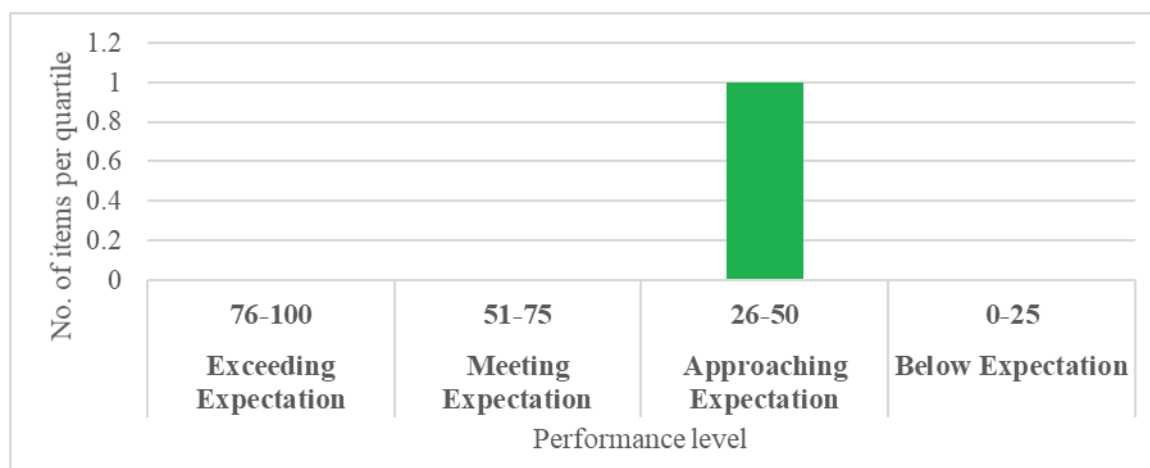
In Kenyan Sign Language, Item 1 required learners to *identify a picture that represented a tourist attraction site*. This assessed the learners' ability to appreciate ethnic and racial relations to enhance social cohesion.

The share of learners who scored correctly on the proxy items on Global Citizenship is shown in table 35 and Figure 21.

Table 35: Performance on the Proxy Questions for Global Citizenship

Subject	Performance on the Proxy Questions				
Kenyan Sign Language	Question Number(s)	1			
	% of learners scoring correctly	39.46%			
Performance Levels	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation	
Quartiles	76-100	51-75	26-50	0-25	
Frequency	0	0	1	0	

Figure 21: Performance on the proxy questions for Global Citizenship



Global Citizenship was assessed in one subject only – Kenyan Sign Language (1 item). On this item, all learners were at Approaching Expectation performance level as displayed in Figure 21. It is worth noting that learners had difficulty in picking out the correct answer, this alludes to the need to expose learners to the building blocks of Global Citizenship in a variety of subjects to enhance the acquisition of knowledge, skills, values and attitudes for building an inclusive just and peaceful global society.

3.4.2 Health Education

The PCIs under Health Education are COVID-19, HIV and AIDS, alcohol and drug abuse and prevention, lifestyle diseases, personal hygiene and preventive health, common communicable and chronic diseases.

Items 16-20 in Kiswahili required the learner to *fill in the blanks spaces with the correct response from the given choices*.

This assessed a learner's ability to understand how to prevent lifestyle diseases with emphasis on the importance of a healthy balanced diet.

In Kenyan Sign Language, Item 4 assessed a learner's ability to *identify unhealthy foods* to avoid lifestyle diseases.

Communicable diseases were assessed in Science and Technology. Item 9 assessed learners' understanding on ways of *preventing infestation by jiggers*. Similarly, Item 26 in Home Science required learners to identify statements that were true about common communicable diseases.

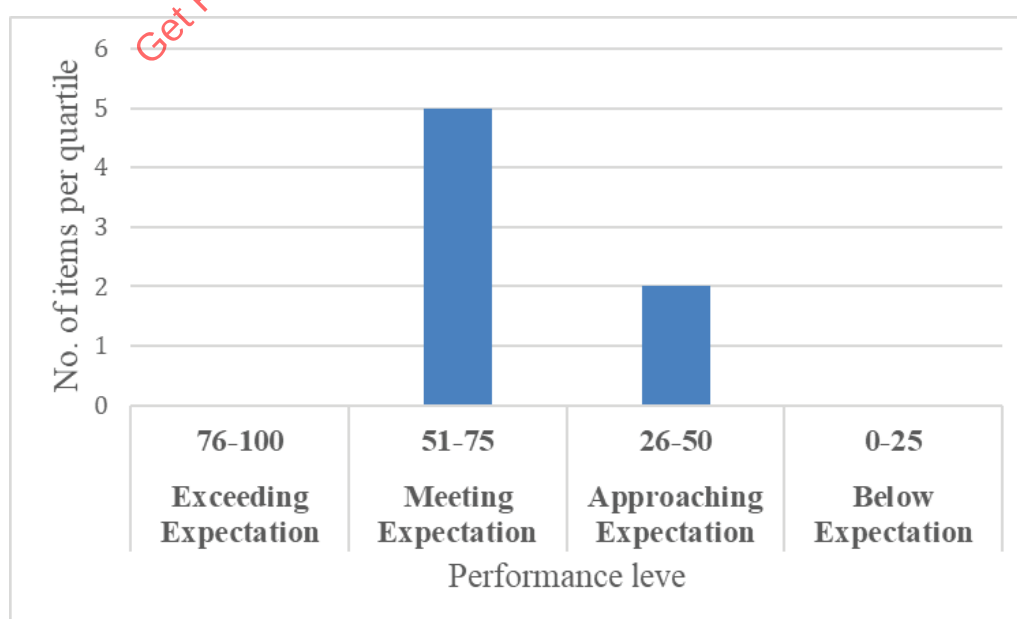
Music also assessed this competency. Item 18 required learners to identify *hygienic measures to be observed after playing a descant recorder*. This assessed the learner's ability to practise personal hygiene and preventive health.

The share of learners who scored correctly on the proxy items on Health Education is shown in Table 36 and Figure 22.

Table 36: Performance on the Proxy Questions for Health Education

Subject	Performance on the Proxy Questions					
Kiswahili	Question Number(s)	16	17	18	19	20
	% of learners scoring correctly	15.06%	69.91%	63.92%	74.98%	65.78%
Kenyan Sign Language	Question Number(s)	4				
	% of learners scoring correctly	36.12%				
Science and Technology	Question Number(s)	9				
	% of learners scoring correctly	51.75%				
Music	Question Number(s)	18				
	% of learners scoring correctly	29.24%				
Performance Levels	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation		
Quartiles	76-100	51-75	26-50	0-25		
Frequency	0	5	2	0		

Figure 22: Performance on the proxy questions for Health Education



As depicted in Table 36, four subjects Kiswahili (5 items), Kenyan Sign Language (1 item), Science and Technology (1 item) and Music (1 item) assessed Health Education. Figure 22 shows that a majority (71.4%) of the learners were at Meeting Expectation and 28.6% were at Approaching Expectation performance levels. It is notable that learners were at Meeting expectation in the five subjects that assessed this competency, indicating a need to give them more learning opportunities to acquire the Health Education competency in a variety of subjects.

3.4.3 Life Skills and Values Education

The PCIs under Life Skills and Values Education include life skills, moral education and human sexuality, etiquette, among others. A wide range of question types exist for testing life skills (Soland et al., 2013).

In skills assessment, the best predictor of future skills performance is through assessing current skills.

In English, Item 1-3 assessed learners' ability to display etiquette when talking with others. In the conversation, *the pupil sought permission from the teacher to be late for school.*

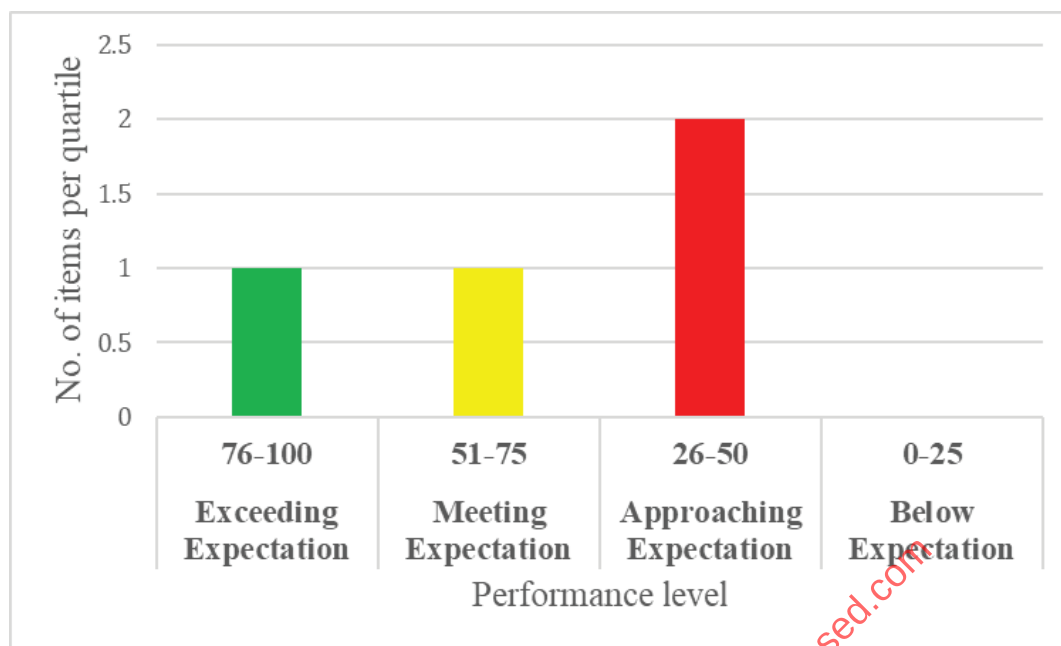
In Kiswahili, Item 23 "*Ukitaka kwenda chooni utamwomba mwalimu ruhusa kwa kumwambia unataka kwenda_____*" assessed learners' ability to seek permission from the teacher using polite language. This assessed the learner's competency in applying values education.

The proportion of learners who scored correctly on the proxy items on Health Education is shown in Table 37 and Figure 23.

Table 37: Performance on the Proxy Questions for Life Skills and Values Education

Subject	Performance on the Proxy Questions					
English	Question Number(s)	1	2	3		
	% of learners scoring correctly	27.85%	25.33%	70.52%		
Kiswahili	Question Number(s)	23				
	% of learners scoring correctly	83.18%				
Performance Levels	Exceeding Expectation	Meeting Expectation		Approaching Expectation	Below Expectation	
Quartiles	76-100	51-75		26-50	0-25	
Frequency	1	1		2	0	

Figure 23: Performance on the proxy questions for Life Skills and Values Education



Life Skills and Values Education was assessed in two subjects only – English (3 items) and Kiswahili (1 item) as shown in Table 37. Figure 23 reveals that a majority of the learners were at Approaching Expectation and the rest at either Meeting Expectation or Exceeding Expectation performance level; none was at Below Expectation in this competency. It is worth noting that this competency was assessed in two subjects only. While learner performance in this competency is commendable, there is need to expose the learners to the competency of Life Skills and Values Education in a variety of subjects.

3.4.4 Education for Sustainable Development (ESD)

The PCIs under Education for Sustainable Development (ESD) include environmental education, disaster risk reduction, safety, and security education (small arms, human trafficking), financial literacy, poverty eradication, countering terrorism, extreme violence and radicalisation, gender issues and animal welfare.

Learners' financial literacy was assessed in Mathematics. Item 26 required learners to *determine how much money they received after selling tomatoes* from their agriculture project. Similarly, Item 11 in Kiswahili, which read: “*Chagua jibu linaloonyesha kuwa msimulizi anafahamu uwekezaji*” assessed learner's competency in financial literacy.

Item 4 in Kiswahili, read “*Leleni alimweleza Kibo athari za kutotunza. Ungekuwa Kibo, ungetaja athari gani nyingine?*” This required learners to state other consequences for not taking care of the environment. The item assessed the learners' competency in issues of environmental education.

In Physical and Health Education, Item 45 required learners to *choose a suitable site for an outdoor shelter*. This item assessed learners' competency in demonstrating knowledge on environmental factors suitable for living (*flood free areas*).

Social Studies assessed the learner's understanding of environmental education (*different climatic zones*) through Item 25, that required learners to *identify the characteristics of semi-desert climate in Eastern Africa*. Also, Item 6 in Art and Craft required learners to *state ways in which plastic bottles can be reused*. This assessed learners' ability to impact positively on the environment by reusing and recycling waste materials.

In Hindu Religious Education, Item 40 assessed learners' understanding of *the scripture that talks about the preservation of the animals*. This assessed a learner's ability to appreciate animal welfare.

The proportion of learners who scored correctly on the proxy items on Education for Sustainable Development is shown in table 38 and Figure 24.

Table 38: Performance on the Proxy Questions for Education for Sustainable Development

Subject	Performance on the Proxy Questions				
Mathematics	Question Number(s)	26			
	% of learners scoring correctly	38.54%			
Kiswahili	Question Number(s)	4	11		
	% of learners scoring correctly	46.77%	29.44%		
Physical and Health Education	Question Number(s)	45			
	% of learners scoring correctly	46.32%			
Social Studies	Question Number(s)	25			
	% of learners scoring correctly	54.26%			
Art and Craft	Question Number(s)	6			
	% of learners scoring correctly	57.36%			
Hindu Religious Education	Question Number(s)	40			
	% of learners scoring correctly	45.45%			
Performance Levels	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation	
Quartiles	76-100	51-75	26-50	0-25	
Frequency	0	2	5	0	

Figure 24: Performance on the proxy questions for Education for Sustainable Development

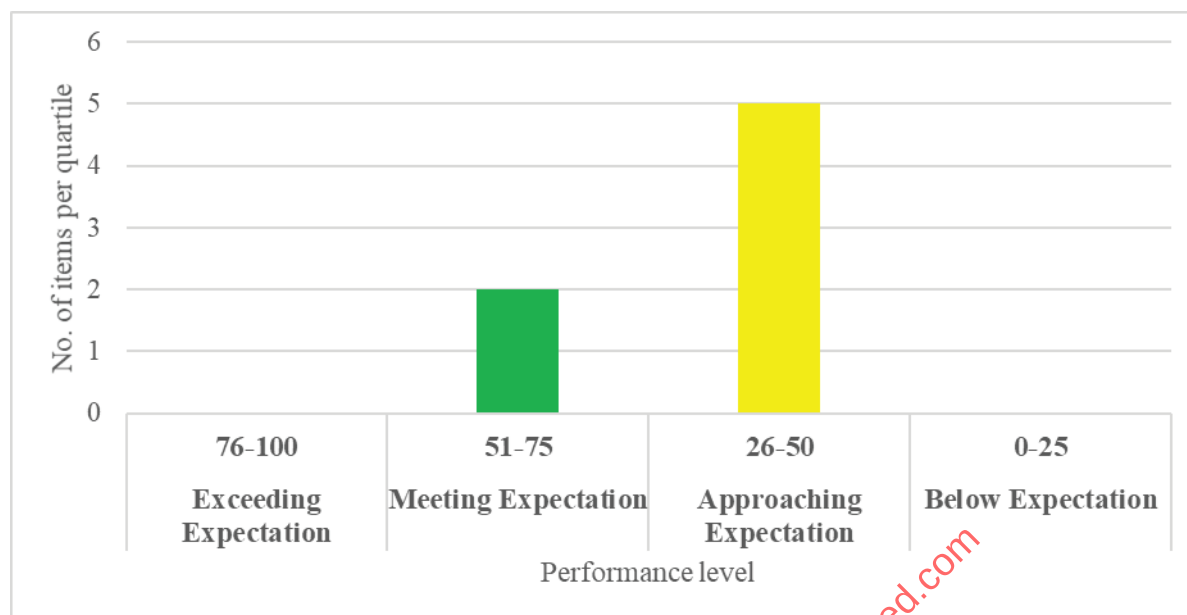


Table 38 displays the six subjects – Mathematics (1 item), Kiswahili (2 items), Physical and Health Education (1 item), Social Studies (1 item), Art and Craft (1 item) and Hindu Religious Education (1 item) – which assessed Education for Sustainable Development. As shown in Figure 24, a majority of the learners were at Approaching Expectation with some at Meeting Expectation performance levels. It is observable that only one item in each of the subjects, except Kiswahili assessed this competency, indicating the need for more items assessing the competency in a variety of subjects.

3.4.5 Learner Support Programmes

The Learner Support Programmes (LSP) covers Non-Formal Programmes (NFP), Values based Education (VbE), Citizenship, and Parental Empowerment and Engagement (PEE). The NFP include guidance services, career guidance, counselling, clubs and societies, sports and games, mentorship and peer education, children's government, and chaplaincy services. VbE entails values such as love, responsibility, respect, unity, peace, patriotism, social justice, and integrity,

which are discussed under the section on Core Values. Citizenship is also discussed in the section on the Core Values. Parental engagement is the active participation of parents in their children's learning and holistic development in collaboration with teachers and other stakeholders (KICD, 2019). Learning experiences at home should reinforce what is learnt in school to help nurture the potential of learners. These connections can be maintained through various activities and provision of opportunities to parents to render services.

This section highlights how non-formal programmes and parental engagement and empowerment were assessed.

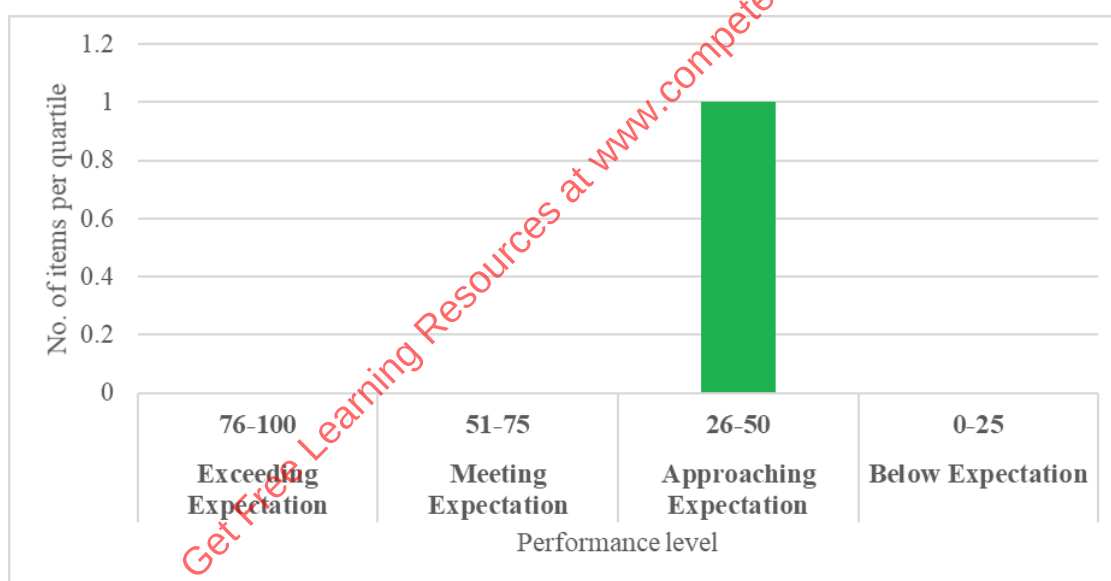
Item 30 in English required learners *to read/follow a passage about three friends playing different games and identify one who plays football only*. This item assessed learners' ability to pick out different sports and games and appreciate the role of sporting activities for career growth and social cohesion.

The percentage of learners who scored correctly on the proxy item on Learner Support Programmes is shown in Table 39 and Figure 25.

Table 39: Performance on the Proxy Questions for Learner Support Programmes

Subject	Performance on the Proxy Questions					
English	Question Number(s)	30				
	% of learners scoring correctly	40.76%				
Performance Levels	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation		
Quartiles	76-100	51-75	26-50	0-25		
Frequency	0	0	1	0		

Figure 25: Performance on the proxy questions for Learner Support Programmes



The PCI on Learner Support Programmes was assessed in English (1 item) as shown in Table 39. In the assessment, all learners were at Approaching Expectation performance level. It is significant to note is that the competency of Learner Support Programmes encompasses Non-Formal Programmes, Values based Education, Citizenship, and Parental Empowerment and Engagement. It is important, therefore, to provide learning opportunities in all these areas and assess learner's acquisition of these competencies.

3.4.6 Community Service Learning

Community Service Learning (CSL) is experiential learning that involves incorporation of community engagement into the curriculum to enhance learning outcomes (Mason & Dunens, 2019). CSL combines classroom learning and community service, providing learners with an opportunity to work with the community members to solve local problems. The members can be from the school or local community.

In assessing CSL the assessor looked out for a learner's ability to; identify current problems facing their community, protect themselves against the issues affecting the community, and prevent spread of the problem.

In Agriculture, Item 17 required learner's to *explain how to control soil erosion*.

The item assessed learners' ability to identify current problems facing their community and how to prevent spread of the problem.

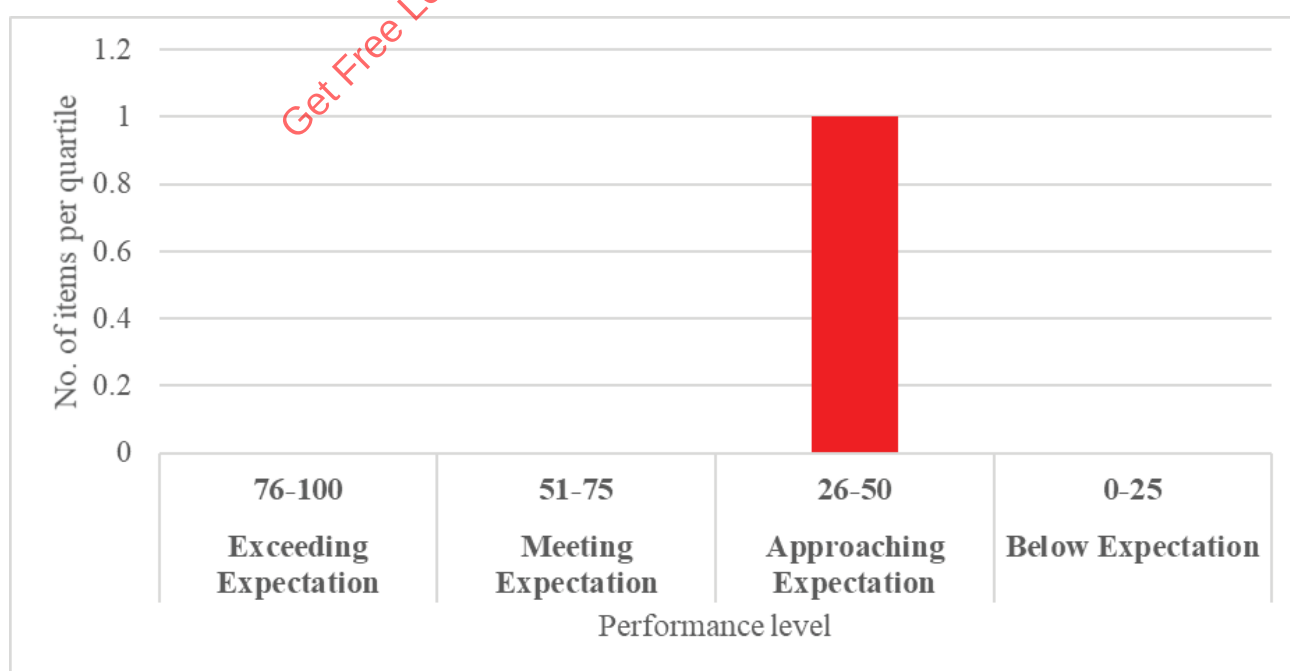
The proportion of learners who scored correctly on the proxy items on Community Service Learning is shown in Table 40 and Figure 26.

As shown in Table 40, Community Service Learning was assessed in Agriculture (1 item) and all learners were at Approaching Expectation performance level. This implies that more learning opportunities should be provided to learners in a variety of subjects to enable them work with the community members to solve local problems.

Table 40: Performance on the Proxy Questions for Community Service Learning

Subject	Performance on the Proxy Questions			
Agriculture	Question Number(s)	17		
	% of learners scoring correctly	39.12%		
Performance Levels	Exceeding Expectation	Meeting Expectation	Approaching Expectation	Below Expectation
Quartiles	76-100	51-75	26-50	0-25
Frequency	0	0	1	0

Figure 26: Performance on the proxy questions for Community Service Learning



Chapter 4

Summary of Findings, Discussions and Recommendations

4.1 Summary of Findings

4.1.1 Assessment Centres

The total number of assessment centres was 32,555 in 2022 and 32,623 in 2023. Generally, there was a slight increase in the number of assessment centres. Some of the counties that registered an increase in the number of assessment centres are: Mombasa at 18 (0.06%), Nairobi at 14 (0.04%), and Nakuru at 14 (0.04%) while a significant decrease was observed in Meru, Homa Bay and Kisii at 19(0.06%), 15 (0.05%) and 11 (0.03%) respectively. The decrease of assessment centres could lead to an influx on enrolment in neighbouring centres, therefore causing a strain on teachers and resources.

Counties in Arid and Semi-Arid Lands (ASAL) registered lower numbers of assessment centres compared to those in non-ASAL areas. For instance, Lamu, Isiolo and Samburu registered lower numbers of assessment centres at 122 (0.37%), 143 (0.44%) and 182 (0.56%) respectively compared to Nairobi, Kitui and Machakos counties that had the highest number of assessment centres at 2,017 (6.18%), 1,520 (4.65%) and 1,205 (3.69%) respectively.

4.1.2 Enrolment and Transition

In 2023, a total of 1,281,210 learners sat KPSEA, comprising 657,893 boys and 623,317 girls. This is an improvement from 2022 where 1,253,577 learners sat KPSEA of whom 648,613 were boys and 604,964 girls.

Desk review of the trends in enrolment of the 2023 Grade 6 cohort shows that a total of 1,325,628 learners were registered at Grade 3 in 2020. Out of these learners, 1,281,210 sat KPSEA in 2023, representing a completion rate of 96.65%. Further analysis revealed that 95.19%, 96.32% and 93.67% of the learners in Grades 3, 4, and 5, respectively, sat the SBAs. This implies that a significant number of learners did not take the formative assessments in their respective grades, a factor pointing to lack of compliance with the assessment policy guidelines in some schools in line with the CBAF. It was observed that 5 counties with notably high registration for 2023 KPSEA were Nairobi (90,798), Kakamega (65,582) and Kilifi (59,661) while low registration was recorded in Isiolo (4,521), Lamu (4,707) and Samburu (6,101).

Of concern is the large number of learners (59,272) who registered for the first time while sitting the 2023 KPSEA summative assessment pointing to lack of compliance to the CBA framework guideline to schools to register all learners at Grade 3 for effective formative and summative assessment. Late registration has implications on the conduct of any assessment, more so where the tracking of learners' performance contributes to future decision making.

4.1.3 Learner Characteristics

4.1.3.1 Gender

It was found that more boys (657,893) than girls (623,317) registered for the 2023 KPSEA. The proportion of boys who registered for the 2023 KPSEA was higher than that of girls by 34,576 (2.70%) compared to 43,649 (3.48%) in 2022. Kilifi County had the lowest disparity in enrolment between boys and girls. Boys were slightly more than girls by only 0.02%. This can be attributed to an increase in the number of girls registered for KPSEA in Kilifi County from 22,766 in 2022 to 29,820 in 2023. In West Pokot, Marsabit and Migori counties, boys were slightly more than girls by only 0.14%, 0.47% and 1.08% respectively. West Pokot has continued to register a steady progress towards gender parity from a gap of 0.25% in 2022 to 0.14% in 2023.

4.1.3.2 Age

Kenya offers the age-based pathway. The appropriate age for grade 6 is 11 years. In KPSEA 2023, 59.16% of the learners at the end of primary schooling were 11-12 years old. 20.42% of the learners were below 12 years while 20.42% were above 11 years. Counties contributing to the 20.42% overage learners are: Garissa

(63.00%), Kwale (53.02%), Kilifi (51.21%), Mandera (49.86%) and Tana River (43.28%). These proportions, however, are lower than those observed in 2022 which had 5 counties recording over 47% of learners as overage, indicating a good move towards age-appropriate grade attendance.

4.1.3.3 Disability

Regarding registration of learners with disabilities, it was established that out of 3,268 who sat the 2023 KPSEA, 1,467 (44.89%) were learners with physical disabilities, followed by 948 (29.01%) learners with hearing impairment, learners with low vision were 705 (21.57%) while 148 (4.53%) were those with visual impairment. Bungoma, Kiambu and Kisumu were among the counties that had the highest number of learners with disability at 164 (5.02%), 160 (4.90%), and 153 (4.68%), respectively. On the other hand, counties majorly in ASAL such as Lamu, Wajir, and Samburu recorded the lowest registration of learners with disabilities at 2 (0.06%), 16 (0.49%), 18 (0.55%) and 20 (0.61%), respectively.

Of concern are the counties reporting low registration of learners with disabilities. This could be attributed to stigma issues preventing these learners from accessing education, as well as lack of early identification and placement. Having a timely assessment by Educational Assessment and Resource Centre (EARC) could ensure inclusivity, access and equity.

4.1.4 Learners' Performance in the 2023 KPSEA

This report indicates that in the following seven (7) out of the fourteen (14) subjects sat, most learners were exceeding or meeting expectation in: English (61.36%); Kiswahili (66.90%); Physical

and Health Education (58.39%); Social Studies (62.80%); Art and Craft (61.98%); Christian Religious Education (66.88%); and Islamic Religious Education (58.22%).

Learners' performance in the following two subjects was at approaching or below expectation: Kenyan Sign language (77.21%); and Hindu Religious Education (57.57%). Having strong foundational learning in these subjects will ensure that learners exiting at the end of primary schooling have better chances of understanding subsequent content in the subject.

This indicates there is a need to enhance teaching and learning resources, retool teachers for better understanding and the interpretation and implementation of curriculum designs, and investigate further causes of this performance trend. Having strong foundational learning in these subjects will ensure that learners exiting at the end of primary schooling have better chances of understanding subsequent content in the subject. Subject specific interventions could be considered to ensure that the subjects with learners performing at approaching or below expectation posed better learning outcomes.

4.1.5 Assessment of Core Competencies, Core Values and PCIs

Concerning assessment of the acquisition of core competencies, core values, and pertinent and contemporary issues in the 2023 KPSEA, proxy test items were analysed for proxy evidence on the foundational building blocks of acquiring the core competencies among learners. Chapter Three details the analysis and findings per Core Competency as well as the Core Values and PCIs. All learners performed at Approaching Expectation based on the proxy evidence in

all Core Competencies. This indicates that the foundation for acquiring the core competencies is being laid and given age-appropriate tasks, the learners are able to display the basic behaviour that portrays the 7 Core Competencies as envisaged in the BECF.

Regarding the foundational acquisition of Core Values, a majority of the learners performed at Meeting Expectation on proxy questions that tested the values of Love and Respect. This was commendable and should be sustained by the teaching, learning and assessment experiences. An analysis on the proxy items that tested the Core Values of Responsibility, Unity, Integrity, and Patriotism revealed that most learners were performing at Approaching Expectation in the foundational acquisition of these values.

Of concern was the proportion of learners performing at Below Expectation when given questions on in the values of Social Justice.

The assessment of the PCIs established that majority of the learners were performing at Meeting Expectation on test items that tested on Health Education and Life Skills and Values Education. Learner performance on proxy items of testing Global Citizenship, Education for Sustainable Development, Learner Support Programmes and Community Service Learning indicates that all the learners were performing at Approaching Expectation.

Conclusion

The 2023 KPSEA Report aims at informing the various education stakeholder as they come up with policy interventions that would ensure the concerted efforts are expended to increase the proportion of learners at the end of primary schooling likely to transit to Junior School with the foundational skills that will help sustain their future learning of concepts. This Report

shows that aspects of learner registration for the formative and summative assessment could be made more efficient to ensure no learner is left behind or disadvantaged. The performance points to the need for teaching and learning resources, teacher retooling, and adoption of subject specific interventions to ensure foundational learning is improved in all subjects at primary school level.

4.2 Recommendations

4.2.1 Ministry of Education

The Ministry of Education should ensure that: schools comply with the formative and summative assessment guidelines for better institutionalisation of CBA.

- a) quality assurance visits are conducted to ascertain the factors that could lead to the closure of some schools/centres and their impacts on learners' completion of primary schooling and transition and ensure the gains made in 100% transition at the end of primary schooling are sustained.
- b) Early Assessment and Resource Centres (EARCs) are well equipped and staffed and easily accessible for effective and timely functional assessment and educational placement of learners with disabilities in educational programmes most suited for nurturing their potential.
- c) policy interventions that promote narrowing the gender gap in access to primary education; age-appropriate school entry or age-appropriate-grade-attendance are implemented, especially in counties with greater disparities.
- d) provision of teaching and learning resources such as descant recorders to learners to

enable them develop the required practical performance skills in Music and provision of adequate visual KSL resource materials such as videos and picture stimuli in schools to enable learners to relate graphics with names/ words to help them build KSL vocabulary.

- e) schools have well established and equipped laboratories for teaching Home Science and performing Science experiments and studios for Art and Craft activities.
- f) teacher trainees are taken through practical learning experiences during their pre-service training so that they gain in-depth knowledge on content and pedagogy to enable them plan and effectively teach the foundational skills for each subject at primary schooling.
- g) CEMASTEAs prioritise school-based teacher support for improving foundational learning of STEM subjects at primary school.
- h) monitoring of learning is frequent to ensure that factors affecting teaching and learning in lower and upper primary levels are investigated and appropriate interventions put in place.

4.2.2 Teachers Service Commission

The Teachers Service Commission plays a crucial role in ensuring the implementation of the curriculum. In this regard, the commission should:

- a) capacity build teachers on methods of instruction and assessment that are authentic, practical and in context with acquisition and application of skills and competences.
- b) capacity build teachers on how to effectively develop in learners the competencies, values

and PCIs to improve their performance in future assessments.

- c) retool teachers with greater emphasise on the use of learning experiences in the curriculum design for learner conceptualisation of curriculum content.
- d) Incorporate the subject specific learning gaps in the assessment tools for Teacher Professional Development process to identify capacity gaps for School Based Teacher Support programmes and address them.
- e) ensure appropriate teacher establishment in schools especially for the teaching of Science and Technology, Art and Craft, Music, Home Science and HRE.

4.2.3 Kenya Institute of Curriculum Development

The Kenya Institute of Curriculum Development should:

- a) collaborate with TSC to strengthen the capacity of teachers to understand and interpret subject-specific learning experiences as outlined in the curriculum design.
- b) make use of the noted learning gaps in each subject and develop teaching and learning materials for sharing via radio lessons, Edu Channel, and other content access modes available.

4.2.4 Teachers and Headteachers

Teachers play a key role in facilitating curriculum implementation. They should therefore:

- a) use teaching strategies and assessment modes that emphasise the application of knowledge, skills, attitudes and values to be acquired by the learners.

- b) analyse school specific reports for learning gaps and come up with more subject specific strategies/ learning experiences to improve on learner content conceptualisation, teaching and assessment.
- c) expose learners to a wide range of contexts such as use of visual aids, print and digital media to ensure acquisition of aspects of reading for comprehension and mastery of content.
- d) link various content areas across different strands and subjects and facilitate learners to realise the inter relationship.
- e) diversify modes of content delivery and assessment that focus on real-life tasks that learners can identify with. For instance, in Social Studies, diagrams should be used to illustrate relief features for better mastery of concepts.
- f) adopt a practical approach by giving learners opportunities to perform tasks more.
- g) involve learners in vocabulary building tasks that create opportunities for using expressive and receptive skills in KSL directly or in pictorial representation, interpreting spatial information and modelling accurate ways of signing words.
- h) ensure that learners are registered at Grade 3 for effective formative and summative assessment in line with the CBA Framework and keep all appropriate progress records.

4.2.5 Parents/Guardians

Parental involvement is pivotal in a learner's progress. The parents/guardians should therefore:

- a) ensure enrolment of children for schooling in line with the school entry age policy.

- b) provide a conducive learning environment for the learners and foster in them positive attitude towards learning.
- c) monitor their learner's progress and motivate them as they undertake their tasks as it helps nurture the learner's potential.
- d) support learning by providing the required materials to the learners during teaching, learning and assessment.
- e) create a rich language environment at home for regular learners and learners with hearing impairment.
- instil values in the learners right from home and compliment the acquisition of core competencies among the learners.

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