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NATIONAL ASSESSMENT SYSTEM FOR MONITORING LEARNER ACHIEVEMENT

GRADE 3 MIDLINE STUDY REPORT

UNDER THE KENYA PRIMARY EDUCATION EQUITY IN LEARNING PROGRAM

MARCH 2026

KENYA VISION 2030

GPE 20 YEARS Transforming Education

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Dr. David Njengere, MBS

CHIEF EXECUTIVE OFFICER

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	-	Age Based
AE	-	Approaching Expectation
APAS	-	Annual Performance Appraisal System
BAS	-	Basis for Admission Score
BE	-	Below Expectation
BECF	-	Basic Education Curriculum Framework
BETA	-	Bottom-up Economic Transformation Agenda
BOM	-	Board of Management
CBA	-	Competency Based Assessment
CBAF	-	Competency Based Assessment Framework
CBC	-	Competency Based Curriculum
CBE	-	Competency Based Education
CEMASTEA	-	Center for Mathematics, Science and Technology Education in Africa
CSO	-	Curriculum Support Officer
CSO-SNE	-	Curriculum Support Officer- Special Need Education
CPE	-	Certificate of Primary Education
EARC	-	Educational Assessment Resource Centre
ESD	-	Education for Sustainable Development
EQAO	-	Education Quality and Accountability
GEM	-	Global Education Monitoring
GCE	-	Global Citizenship Education
GPF	-	Global Proficiency Framework
HI	-	Hearing Impairment
ICT	-	Information and Communication Technology
IEA	-	International Association for the Evaluation of Education Assessment
IEP	-	Individualized Education Program
IRT	-	Item Response Theory
LCD	-	Liquid –Crystal Display
LOI	-	Learning Opportunity Index
KACE	-	Kenya Advance Certificate of Education

KAPE	-	Kenya African Preliminary Education
KEMI	-	Kenya Education Management Institute
KCE	-	Kenya Certificate of education
KCPE	-	Kenya Certificate of Primary education
KCSE	-	Kenya Certificate of Secondary Education
KEPSHA	-	Kenya Education Primary School Heads Association
KICD	-	Kenya Institute of Curriculum Development
KISE	-	Kenya Institute of Special Education
KNEC	-	Kenya National Examinations Council
KPEEL	-	Kenya Primary Education Equity in Learning
KNAP	-	Kenya National Association of Parents
MDG	-	Millennium Development Goal
ME	-	Meeting Expectation
M.Ed	-	Master of Education
MILO	-	Monitoring Impacts on Learning Outcomes
MLA	-	Monitoring Learner Achievement
MLR	-	Multiple Linear Regression
MoE	-	Ministry of Education
MPL	-	Minimum Proficiency Levels
NASMLA	-	National Assessment System for Monitoring Learner Achievement
NEMIS	-	National Education Management Information System
NESSP	-	National Education Sector Strategic Plan
PAD	-	Project Appraisal Document
PEE	-	Parental Empowerment and Engagement
PCIs	-	Pertinent and Contemporary Issues
PDO	-	Project Development Objective
PHD	-	Doctor of Philosophy
PI	-	Physically Impaired
P1	-	Certificate of Primary Course in Teaching
PRIMR	-	Primary Math and Reading Initiatives
PTR	-	Pupil Teacher Ratio

QASO	-	Quality Assurance and Standard Officer
RAs	-	Result Areas
RMA	-	Rapid Mathematic Assessment
RoK	-	Republic of Kenya
S1	-	Diploma Certificate of Secondary Course in Teaching
SAGs	-	Self-Assessment with Goal Setting
SAMDEM	-	Sample Design Manager
SEQIP	-	Secondary Education Quality Improvement Project
SDGs	-	Sustainable Development Goals
SDL	-	Self-Directed Learning
SIP	-	School Improvement Programme
SNE	-	Special Need Education
STATA	-	Statistics and Data
STEM	-	Science Technology Engineering and Mathematics
TPD	-	Teacher Professional Development
TPAD	-	Teacher Performance Appraisal and Development
TSC	-	Teachers Service Commission
TTCs	-	Teachers Training Colleges
UK	-	United Kingdom
UN	-	United Nations
UNESCO	-	United Nations Education Science and Cultural Organization
UNICEF	-	United Nations Children's Education Fund
USA	-	United States of America
USAID	-	United States Agency for International Development
UPE	-	Universal Primary Education
VBE	-	Value-Based Education
VI	-	Visually Impaired
WASH	-	Water Sanitation and Hygiene
WHO	-	World Health Organization

MESSAGE FROM THE COUNCIL CHAIRMAN

The Kenya National Examinations Council is mandated to conduct national examinations, certify learner and carry out research in education assessment. This is in line with the Government commitment in ensuring access to quality and equitable basic education as per the Sustainable Development Goals (SDGs) target 4.1. To realize this, the Government has operationalized a number of policy and legal frameworks such as Competency Based Assessment Framework, Basic Education Curriculum Framework, the Kenya National Examination Act No 29 of 2012 among others. In addition, the Ministry is implementing the National Education Sector Strategic Plan (NESSP) 2023-2027, aimed at ensuring quality education, training and research that are relevant to the dynamics of the 21st century. In the recent past, the Ministry of Education, with the support of development partners, has continued to implement education reforms in line with the Medium Term Plan (IV) and the recommendations of the Presidential Working Party on Education Reforms. Key among these changes is the Competency Based Curriculum (CBC) and Competency Based Assessment (CBA), that are designed to ensure that the products of education in Kenya can competitively fit in the global market.

The Kenya National Examinations Council (KNEC) has been conducting sample-based research to monitor learner achievement across the Grades. In 2024, KNEC, carried out NASMLA Grade 3 study in English language activities and Mathematics activities for learners in the Age Based Curriculum. Similarly, the study also encompassed Communication, Social and Pre-Literacy Skills and Pre-numeracy Activities for learners at the Foundation Level of the Stage-Based Curriculum. This study was conducted under the Kenya Primary Education Equity in learning Program (KPEEL). The focus of the NASMLA Grade 3 study was to assess learner achievement of the level learning outcomes in the specified learning areas at the end of early years of learning. Further, the study sought to assess the Project Development Objective (PDO) indicators of the KPEEL program following the roll out of targeted program interventions. Learningterventions are geared to equalize learning opportunities between boys and girls across the country by improving learner achievement of high order competencies in numeracy and literacy nationally, including schools located in the refugee camps, urban informal settlements, and those for learners with special needs and disabilities.

The findings of this study have revealed significant progress in learner achievement across the learning areas assessed. Similarly, crucial learning gaps that need to be addressed have also been identified for action by various stakeholders in the education sector. My gratitude goes to the Ministry of Education for the leadership in the assessment process. I specially thank KNEC technical working group for ensuring that the preparation for the study, actual data collection and report writing for the NASMLA Grade 3 Study were done with precision and within the stipulated time frame.

I therefore call upon all the stakeholders in education to implement the recommendation proposed in this study in order to ensure improved education quality.

Prof. Julius Nyabundi, OGW

COUNCIL CHAIRMAN

KENYA NATIONAL EXAMINATION COUNCIL

EXECUTIVE SUMMARY

One of the main objectives that Kenya's Vision 2030 social pillar commits the nation to achieving is the provision of globally competitive, high-quality education. National assessments are conducted to ensure that the quality of education aligns with this objective. In this regard the current study sought to: a) determine the achievement of high-order competencies in English and Mathematics of Grade 3 learners among the various sub-groups; b) find out learner and teacher contextual factors; c) establish the implementation of Competence Based Curriculum (CBC) and Competence-Based Assessment (CBA); d) find out the availability and adequacy of school inputs and infrastructure; e) assess issues of school management, teacher management, school-parent/guardian relations, community relations and school environment that influence learner achievement; and f) determine the combination of inputs that are associated with Grade 3 learners achievement levels in Mathematics and English.

The study established that nationally, 41.4% of learners achieved the 50% benchmark at Level 4 in English Language Activities, where items required predicting possible responses for comprehension. However, performance varied across regions, with notably low proportions of learners achieving the minimum benchmark in West Pokot County (15.6%), Isiolo County (18.4%), and Turkana County (18.5%). Similarly, only 21.4% of learners in refugee host counties and 28.0% of learners with visual impairment in age-based special schools attained the benchmark.

In Mathematical Activities, 26.8% of learners nationally reached the 50% benchmark at Level 4. Low performance was observed in several target counties, including Marsabit County (14.0%), Busia County (16.4%), and Vihiga County (17.3%). Similar trends were noted in schools in informal settlements and refugee host counties where 24.6% and 26.5% of the learners achieved the 50% benchmark respectively.

Despite these gaps, midline findings show improvement compared to the baseline study. In English Language Activities, 43.7% of learners achieved the Level 4 benchmark in the midline study compared to 23.9% at baseline. Likewise, in Mathematical Activities, 27.1% reached the benchmark at midline compared to 15.8% at baseline.

Nationally, girls performed slightly better than boys in English Activities, recording a mean score of 17.3 compared to 16.5 for boys. A similar trend was observed in target counties where girls scored 15.8 against 15.0 for boys. However, among learners with visual impairments in special schools (age-based), girls recorded the lowest mean score (7.8) compared to 13.5 for boys. In Mathematical Activities, the national mean score was 17.3, with girls and boys performing at par. Special schools recorded the lowest mean score (15.0), where girls scored 15.6 and boys 14.1. Learners with visual impairment had the lowest mean score (13.9), while those with hearing impairment recorded the highest (15.5).

Regarding achievement by age, learners below 9 years achieved the highest mean scores in both English Activities (18.8) and Mathematical Activities (18.5), while learners above 10 years recorded the lowest performance; 15.8 in English Activities and 16.8 in Mathematical Activities.

At the county level, Nandi County recorded the highest mean score in English Activities (22.9), followed by Kajiado County (22.1) and Kirinyaga County (21.1), while Busia County had the lowest (9.9). In Mathematical Activities, Nandi County again recorded the highest mean score (21.8), followed by Kajiado County (20.7) and Garissa County (21.2), whereas Turkana County recorded the lowest mean score (14.2).

In English Activities, inference questions recorded the highest proportion of learners achieving the 50% benchmark nationally (81.0%), followed by prediction (72.8%), language structure (72.1%), direct questions (70.6%), and vocabulary (67.0%). The lowest performance in vocabulary was observed in schools in refugee host counties (57.1%). In special schools (age-based), the lowest proportion was recorded in prediction (61.0%) among learners with hearing impairment.

In Mathematical Activities, geometry had the highest proportion of learners attaining the minimum competency across all school categories, while measurement recorded the lowest proportion nationally (39.2%), and across all categories of schools.

At the Foundation Level under the stage-based curriculum, less than 50% of learners achieved the Meeting Expectation level in most pre-numeracy tasks in both the Baseline and Midline studies, indicating limited mastery of the assessed skills. However, pre-literacy performance improved from 42.8% at Baseline to 50% at Midline. Of concern, fewer than 30% of learners were reported to practice essential personal grooming habits such as cleaning the body and brushing teeth daily, highlighting gaps in the acquisition of key foundation-level life skills.

Learner gender and attendance were found to have an influence on achievement. In English Activities, girls are likely to score 0.66 points higher than boys. However, in Mathematical Activities, boys are likely to score 0.09 more points than girls. Additionally, learners who attend school regularly are likely to obtain 0.51 more points than their counterparts in English Activities.

Availability of Mathematics textbooks positively impact Mathematics scores. Learners who have Mathematics textbooks are likely to obtain 0.99 more points in English Activities than their counterparts without textbooks. Similarly, learners with Mathematics books are likely to obtain 0.56 more points in Mathematical Activities compared to their counterparts who do not have a mathematics textbook.

Higher dropout cases have a significant negative impact both in English and Mathematics scores. Learners in schools with higher dropout cases are likely to obtain 1.75 and 1.44 less points in English and Mathematics respectively than their counterparts in schools with lower dropout cases.

Learners taught by teachers who have attended more professional development sessions are likely to obtain 4.16 more points in English activities and 3.98 more points in Mathematics compared to their counterparts whose teachers have less professional development.

On learners' gender, nationally, there were slightly more boys (50.4%) than girls (49.6%). In schools in refugee camps, there were more girls than boys at 50.5% and 49.5% respectively. A similar trend was witnessed in schools in informal settlements where girls were more than boys (52.0% vs 48.0%) as well as in special schools (61.5% vs 38.5%).

On age, the majority of learners (65.1%) nationally were age-appropriate at 9 to 10 years, while 32.1% were overage and 2.8% underage. Schools in refugee camps had the highest proportion of overage learners at 88.2% followed by schools in refugee host counties at 75.2%.

Regarding availability of regular meals, only 34.2% of learners eat breakfast daily, with fewer consuming lunch (29.3%) or dinner (31.9%). Notably, 4.6% of learners go all day without meals, especially in schools in refugee host counties (6.2%).

Pertaining to learners' primary language spoken at home, Kiswahili was reported as the most commonly used language by 40.4% of learners nationally, followed by mother tongue used by 38.3% of learners. Schools in refugee camps reported the highest proportion (61.5%) of learners using their mother tongue at home.

Regarding daily school attendance, the study found that 76.1% of learners nationally reported to have attended school everyday of the term. The lowest proportion of learners reporting to have attended school daily was observed in special schools at 71.2%. There is a notable proportion of learners who miss school in a term. Illness is the key reason for absenteeism as reported by 56.1% of learners.

Further, the findings show that 44.6% of learners reported having repeated a grade, with highest rates observed in schools in refugee host counties (57.6%) and those in informal settlements at 47.2%. Additionally, 55.5% of schools nationally had experienced drop out cases. The highest proportion as reported by Heads of Institutions was schools in refugee camps (100%) and schools in refugee host counties (75.0%). Poverty (12.7%), domestic responsibilities (11.2%) and sickness of learner/par-

ent (9.0%) were the main reasons contributing to cases of dropout.

On teachers' gender, the study found that nationally, female teachers constituted the majority at 65.9%. The gender disparity was more pronounced in schools in informal settlement (83.9%) and in schools in refugee host counties (66.7%). In contrast, a relatively more balanced distribution was observed in schools in target counties, non-host counties and special schools.

Regarding professional qualifications, most Grade 3 teachers nationally had a P1 certificate as their highest qualification at 57.5%. Schools in non-refugee/non-host counties recorded the highest proportion of P1 teachers (71.6%), while refugee host counties reported a mixed profile, with 63.0% holding P1 and 20.0% possessing S1/Diploma qualifications. A smaller proportion (11.8%) of teachers nationally held Bachelor's degrees.

On teaching experience, 30.7% of teachers nationally had served 6 to 10 years. A notable proportion (14.2%) of teachers nationally, 38.7% and 54.6% of teachers in schools in informal settlements and special schools respectively had served for over twenty years. On the other hand, 29.5% of teachers nationally had served for 1 to 5 years.

The majority of teachers nationally (73.0%) were employed by the Teachers Service Commission (TSC). A smaller proportion (19.7%) were employed by Boards of Management (BoM). An additional 7.4 % were supported by other arrangements, including partner organizations, particularly in refugee settings.

Regarding teacher preparedness and their role in CBC implementation, the study established that nationally, most teachers are prepared to implement CBC, with 99.1% already trained on the curriculum. All teachers from schools in refugee camps and special schools reported to have been trained. The findings also revealed that there is a notable gap in regard to effectiveness of CBA training with 69.7% of teachers indicating that it was not effective. Although 50.9% of teachers feel that additional duties do not impact their teaching, those in schools in refugee camps (33.3%) and host counties (47.1%) are feeling the pressure. Of concern is the shortage of specialised staff required to assist learners with special needs. For example, sign language interpreters comprise 1.9% of the workforce nationally, and the availability of such support is particularly lacking in schools in refugee camps and targeted counties.

On effective lesson delivery, nationally, curriculum designs were found to be available and in use at 95.2%. However, effective lesson planning lags in certain areas, particularly schools in refugee host counties where 77.8% of teachers consistently prepared lesson plans. Teacher absenteeism remains a concern, with a national rate of 44.4%, 75.0% in schools in refugee camps and 62.5% in schools in informal settlements. Absenteeism is primarily attributed to sickness (32.0%) and official duties (30.0%).

In terms of pedagogical practices, demonstrations are widely used as reported by 83.4% of teachers, while ICT integration remains limited across most school categories except in schools in refugee camps, where 44.4% of teachers reported its use. Homework and remedial lessons are generally offered, with 96.2% of teachers providing extra support, though 22.2% of teachers in schools in refugee camps do not.

Over 80% of headteachers reported that teachers primarily use question and answer, oral/aural, and written tests for assessment, indicating continued reliance on traditional assessment methods. More than half also reported using projects, checklists, and observation schedules to some extent, showing gradual adoption of diverse tools. Notably, all teachers in schools in refugee camps reported that they do not use journals in assessment.

On assessment feedback, parents are the main recipients nationally (19.5%), with slightly higher rates in non-refugee/non-host counties (21.2%), target counties (20.0%), and special schools (18.5%). However, feedback sharing with parents is lower in schools in refugee camps (7.7%).

The findings show that schools are making efforts to strengthen communication with parents, with

49.6% of schools holding parent meetings three times annually. This practice is reported by 80.0% and 62.5% of headteachers in schools in refugee camps and in informal settlements respectively.

Parental support to school programmes is largely financial, with the highest contributions coming from payment of school levies, donations and fundraising, and provision of learning materials as reported by 22.0%, 20.0% and 17.0% of headteachers respectively. Other forms of support include participation in school feeding programmes, volunteering in school activities, and supporting infrastructure development.

Pertaining to core values, learners demonstrated strong acquisition, with exemplary performance in social justice and patriotism across most school categories. However, challenges were observed in special schools, where learners attained scores of 77.4% and 72.4% at "developing level" in the values of love and peace respectively. In schools in informal settlements, learners attained a score of 78.1% in the value of peace.

Awareness about Pertinent and Contemporary Issues (PCIs) was moderate across school categories, though gaps were noted in health awareness where learners scored 25.0%, 39.6% in child protection in schools in refugee camps, and 44.5% in social responsibility in schools in refugee host counties.

Implementation of Education for Sustainable Development (ESD) was strongest in curriculum and pedagogy at 86.0% and community engagement at 87.1%, showing strong integration of sustainability concepts into teaching and school-community partnerships. However, ESD institutionalization in governance, policy, and school culture remained weak at 62.4% nationally, with particularly low awareness in refugee-host counties (46.7%) and non-refugee/non-host counties (40.0%).

On facilities and infrastructure, the study revealed that schools in refugee camps had comparatively better access to adequate facilities, with all headteachers reporting the availability of 16 out of 28 key facilities which included classrooms, playgrounds, latrines, guidance and counseling offices, and computers. However, facilities such as computer rooms, libraries, dining halls, isolation/sick bays and counseling offices were reported to be unavailable in schools in refugee host counties, schools in target counties, and schools in non-refugee/non-host counties.

Regarding availability of classrooms, it was observed that 93.7%, 91.9% and 88.9% of schools nationally, in schools in target counties and non-refugee/non-host counties respectively reported availability of classrooms. Nationally, the study also found availability of age-appropriate furniture and adequate classroom conditions, with desks present in 92.3% of schools and ventilation at 95%.

Infrastructure disparities were evident in schools in refugee camps, target counties, and special schools, with 14.6% of schools still using earthen floors and 1.3% using twigs or sticks for walls, compromising safety. While stone and brick walls dominated, 48.3% of schools nationally reported using iron sheets for walls, reflecting ongoing inequalities in the physical learning environment across school contexts.

With respect to classroom inputs, the study found availability of basic classroom inputs like teachers' guides (97.5%), desks (97.0%), textbooks (94.9%), and chalkboards (94.4%). However, access to digital and supplementary resources was low, with 42.9%, 31.1% and 19.1% reporting access to computers, internet and smartboards respectively.

In terms of teaching and learning facilities, the study found high availability of key classroom inputs, with 94.3% of learners reporting access to desks, 93.3% to Mathematics textbooks, and 93.1% to English textbooks. Exercise books (92.9%), pencils (90.2%), and chairs (86.0%) were also widely available. However, notable gaps emerged, with 38.7% and 35.7% of learners reporting the inadequate class readers and tablets, respectively.

On textbooks, the study revealed that while many schools (83.2% in English, 80.8% in Mathematics) had a learner-book ratio of 1:1 to 1:3, gaps remain, with 4.6% and 5.6% lacking textbooks. Special schools reported better book availability with 50%

achieving a 1:1 book to learner ratio. However, schools in refugee camps and informal settlements faced significant shortages, where 70.2% and 67.7% of schools had English and Mathematics supplementary textbooks. All Special schools had English textbooks, while 87.5% and 78.3% of schools in informal settlements and target counties respectively had English textbooks. However, 60.0% and 66.7% of schools in refugee camps and host counties had English textbooks. Mathematics textbooks were available in 55.6% and 60.0% of these schools.

Nationally, the availability of essential learning materials (exercise books, pencils/pens, erasers, and rulers) was generally high, with over 82.7% of schools reporting adequate supplies. Exercise books were the most available (95.4%), followed by pencils/pens (93.8%). All schools in refugee camps had availability of both exercise books and pencils/pens, while special schools reported the lowest availability (88.3% for exercise books and 66.7% for pencils/pens).

On library or book corner, a significant proportion of learners (69.3%) nationally reported having access to a library or book corner. Schools in informal settlements and special schools had higher availability (83.7% and 82.7%, respectively), while schools in refugee camps and target counties had lower availability (55.6% and 66.3%). Overall, 45% of learners across all categories did not have access to a library or book corner.

Nationally, tablets, LCD projectors, cabinets, and laptops were the most available ICT facilities, observed in 77.0%, 63.5%, 60.4%, and 58.1% of schools respectively. It was also noted that schools in refugee camps, target counties, and special schools had high tablet availability as observed at 100.0%, 86.4%, and 64.7% respectively. However, essential ICT facilities like smart boards and adaptive devices were less available nationally.

Regarding facilities and infrastructure for SNE learners, adequate lighting was reported in 56.8% of classrooms and 52.8% of pathways. However, auditory rehabilitation and physiotherapy rooms were available in only 4.7% of schools.

The availability and adequacy of environmental adaptation facilities were generally low, with 36.6% of schools having staff toilets nationally. Special schools reported availability of disability-related facilities at 66.7% including adapted staff toilets, accessible pathways, lighting in classroom and use of bright colours for learners with low vision. Schools in refugee camps had no environmental adaptations. Classroom adjustments like desk placement and adequate spacing were also low at 35.5% and 20.3% respectively.

Nationally, the availability of assistive devices and teaching resources was low, with the highest adapted being ICT equipment at 9.4%. It was further noted that Mathematical equipment was the most adequate at 72.7%.

Water and power availability were high, reported at 93.9% and 90.9% respectively. All schools in refugee host counties, non-refugee/non-host schools, and special schools had 100% availability. However, schools in target counties reported comparatively lower availability at 85.7%. Nationally, 67.7% of schools had running water, with special schools having higher availability at 83.3%.

On toilet facilities, over 90.0% of schools nationally reported availability of clean, secure, and well-maintained toilets, including separate facilities for boys, girls, and staff. However, 72.6% of schools lacked adapted toilets for learners with disabilities. Additionally, 45.7% lacked sanitary disposal bins, and 33.6% had no handwashing points, with schools in refugee host counties and informal settlements most affected. Overcrowding was also noted, with 33.6% of schools failing to meet recommended toilet-to-pupil ratios.

Concerning school meals, nationally, 79.8% of schools provided meals for teachers, while 66.1% offered meals for pupils. All schools in refugee camps and special schools had meals for pupils, but only 50% of schools in informal settlements did. Additionally, 80% of special schools and 71.4% of schools in informal settlements provided meals for teachers. The study also found out that 63.9% of schools nationally provided lunch, with special schools, schools in refugee host counties and ref-

ugee camps offering lunch at 100%, 77.8% and 71.4%, respectively.

On school management, the study found out that a majority (90.9%) of the headteachers met the minimum academic qualifications and had the requisite professional qualification to head a primary school. A significant number of headteachers had undertaken courses in Education Management, Guidance and Counseling, Financial Management, Teacher Professional Development and Institutional Leadership. Records available in most schools included duty rota, teachers' responsibility list and school rules, while the least available records were records of mitigation on identified absenteeism cases and records on orphans and vulnerable children.

Further, a majority of the schools had functional BoMs. A significant 33.3%,18.2%, 12.5% of schools in refugee camps, refugee host counties and non-refugee/non-host counties did not have School Strategic Plans (SSPs). In addition, it was reported that nearly all schools, nationally and across the school categories, had School Improvement Plans (SIPs). The priority areas in SIPs that were noted included; supporting effective teaching (14.5%) , enhancing learning outcomes in foundational numeracy and literacy (12.4%) , improving school environment (14.0%), Water Sanitation and Health (WASH) (12.4%) , and management and accountability (12.7%).

Concerning availability of legal and policy documents, schools across all the categories reported having a variety of legal documents, like Children's Act (2001), Public Health Act (2012), the Constitution of Kenya (2010), Basic Education Act (2013), Persons with Disabilities Act (2003); among others. Further, it was reported that all the schools had school level policies, such as school feeding and child protection policies.

Pertaining to ICT integration, more than half (65.5%) of the schools have guidelines on ICT integration. There was widespread use of ICT in the school management practices in areas such as management of examinations and assessment, human resource management of teachers, staff appraisal and performance reporting, teacher professional development, and in communicating with stakeholders.

On teacher management, over 43.0% of the headteachers reported their schools to have between 11-20 teachers, with schools in refugee camps having the highest number of teachers at 21 and above. As regards TPAD, staff appraisals are carried out in most schools as reported by 86.7% of headteachers nationally, all headteachers in special schools and schools in informal settlements, 87.5% of headteachers of schools in non-refugee/non-host counties, and 81.8% of headteachers of schools in target counties. All schools across the categories, and 98.7% nationally, have a functional children's council which contributes to the day to day running of the schools.

CHAPTER ONE 1

BACKGROUND TO THE STUDY

1.1 Introduction

In this chapter a background to the National Assessment System for Monitoring Learner Achievement (NASMLA) Grade 3 study and a brief on the Kenya Primary Education Equity in Learning Program (KPEEL) are presented. The chapter also presents the key policy concerns informing the study and outlines the purpose, research objectives, justification, and significance of the study. Further, the chapter presents the conceptual framework and methodology of the study.

1.2 NASMLA Grade 3 studies

NASMLA studies are national sample-based studies conducted by the Ministry of Education (MoE) through the Kenya National Examinations Council (KNEC) under the NASMLA Framework. These studies are conducted to assess attainment of learning competencies in numeracy and literacy at the end of early years of learning. The current study targeted all grade 3 learners in Kenya including those with special needs and disabilities and is conducted under the Kenya Primary Education Equity in Learning Program (KPEEL).

1.3 The KPEEL program

The Ministry of Education is implementing the KPEEL program which is a 5-year program from 2022-2026 which has since been extended to 2029. The Program objectives are to reduce regional disparities in learning outcomes, improve the retention of girls in upper primary education, and strengthen systems for delivering equitable education outcomes. It is being implemented nationally, including schools located in refugee camps, urban informal settlements, and those for learners with special needs and disabilities.

Beneficiaries of the program comprise 6.6 million learners in primary education, including about 221,529 children in refugee hosting counties of Garissa and Turkana. In addition, the program is to benefit about 117,900 Refugee children in camp-based primary schools, approximately 20,000 diploma teacher trainees in Teacher Training Colleges, and about 200,000 Primary school teachers.

The KPEEL program has three Result Areas (RAs) as displayed below:

Source: KPEEL Program Appraisal Document.

Under Result Area 1, the program aims to promote equity by targeting counties on the basis of the share of students achieving high-order proficiency levels in numeracy and literacy at Grade 3. These interventions target schools in the bottom 10 counties based on the NASMLA 2018 study report, which include Mandera, Wajir, Garissa, Samburu, Narok, Bomet, Kisii, Siaya, Turkana and Bungoma.

This Result Area focusses on four key interventions aimed at improving the school environment for effective teaching and learning. The interventions include: (i) results-based school grants, (ii) improv-

ing teacher deployment in target schools with the highest shortage; and (iii) supporting school meals for vulnerable learners; and (iv) conducting national sample-based learning assessments (NASMLA).

One of the Project Development Objective (PDO) indicators for the KPEEL program is the increase in the share of students achieving higher order competencies in numeracy and literacy in counties falling in the lowest quintile of performers, including in refugee populations. This NASMLA Grade 3 2024 study was used to measure this PDO indicator.

1.4 The Baseline data

Scores from the Monitoring Learner Progress (MLP) Grade 3 2022 provided the baseline data for the KPEEL program. In MLP, two forms of assessments were administered at Grade 3 level in the age-based curriculum. The first one is the integrated learning assessment (ILA) which comprises a project with several performance tasks derived from different learning areas. The second form of assessment comprised written and oral tests which are administered for English language activities and Mathematical activities. At foundation level for the stage-based curriculum, learners undertake performance tasks in communication, social & pre-literacy skills and pre-numeracy activities.

The baseline data for the KPEEL program was derived from the written assessments of the two assessed learning areas for the age-based learners and performance tasks for the learners in the stage-based curriculum.

1.5 General policy concerns

This NASMLA Grade 3 Midline Study 2024 is guided by twenty general policy concerns, grouped into five themes.

The theme one focuses on learners' characteristics and learning environments. This theme identifies the following general policy concerns: a) personal characteristics of Grade 3 learners; b) school context factors experienced by Grade 3 learners, such as grade repetition and homework; c) access to classroom materials; d) access to library books/ class readers; and e) levels of foundational knowledge, skills, attitudes, and values for Education for Sustainable Development (ESD) : core competencies development, using Information and Communication Technology (ICT) in learning, safety for self/others, psychosocial wellbeing, communication, and age-appropriate responsiveness to Pertinent and Contemporary Issues (PCIs).

The second theme focuses on Grade 3 SNE teachers' characteristics and viewpoints on teaching, classroom resources, professional support, and job satisfaction. Under this theme, the policy concerns are: a) the personal characteristics, such as age, gender and socio-economic status; b) the professional characteristics such as academic, in-service and pre-service training; c) allocation of time to the responsibilities of teaching, preparing for lesson assessment and marking/scoring; d) teachers' views on: learner activities within the classroom, teaching goals, assessment procedures and practices, and meeting and communicating with parents; e) availability and adequacy of classroom furniture, ICT devices/internet connectivity and classroom furniture and teaching equipment; f) professional support to teachers, such as quality assurance visits and advisory visits, and factors that impact teacher job satisfaction; f) factors that impact teacher satisfaction.

Theme three focuses on the characteristics of school heads, their perspectives on educational infrastructure, the organization and operation of schools, and the challenges faced by learners, staff, and the school community in implementing Competency Based Education (CBE) at lower primary. The policy concerns under this theme are the headteachers': a) personal characteristics; b) professional characteristics; c) views on general school infrastructure and the condition of school buildings; d) views on daily activities, organizational policies, quality assurance visits, community input, and problems with learners and staff.

Theme four is concerned with equity in the allocation of human and material resources among regions and among schools within regions and sub-populations.

The fifth theme focuses on the achievement of learning outcomes in numeracy and literacy. The policy concerns here pertain to meeting set benchmarks in line with the Global Proficiency and Minimum Proficiency levels, as well as the variations in achievement levels in numeracy and literacy among Grade 3 learners.

1.6 Purpose of the study

The study seeks to monitor learner achievement at the end of the early years of learning for both the age-based and stage-based curriculum and assess the quality of education and inclusiveness following the implementation of the CBE reforms in Kenya. The study also seeks to assess the progress of the PDO indicator midway after the rollout of the KPEEL program.

1.7 Research objectives

The research objectives for this study are to:

a) determine the achievement of high-order competencies in English and Mathematics of Grade 3 learners among the various sub-groups;

b) find out learner and teacher contextual factors;

c) establish the implementation of Competence Based Curriculum (CBC) and Competence-Based Assessment (CBA);

d) find out the availability and adequacy of school inputs and infrastructure;

e) assess issues of school management, teacher management, school-parent/guardian relations, community relations and school environment that influence learner achievement; and

f) determine the combination of inputs that are associated with Grade 3 learners achievement levels in Mathematics and English.

1.8 Justification of the study

The NASMLA Grade 3 Midline study 2024 was undertaken in line with the NASMLA Framework. This is the first national study since the rollout of Basic Education Curriculum Framework (BECF), to monitor the quality of education and assess the achievement levels of learners. It is also the first study at that level to monitor learner achievement in the stage-based curriculum. The stage-based curriculum is for learners with severe and profound disabilities and focuses on the acquisition of skills that will enable them to attain independent living.

The current study will also provide data that will inform the progress on the attainment of the KPEEL Program Development Objectives. The findings of this study will indicate the progress towards reducing gender, sub-group, and regional disparities in the achievement of learning outcomes. Thus, inform any adjustments needed in the interventions.

This study, therefore, is in line with the aspiration of the MoE to inform policy and strengthen the management systems at national level for effective delivery of quality education.

1.9 Significance of the study

This study finds significance in the following:

a). The findings will indicate the progress of the attainment of learning outcomes (especially high-order thinking skills) in numeracy and literacy from the baseline data, to inform the improvement of targeted interventions by the KPEEL program to enhance learning outcomes by the endline.

b). The monitoring of availability, adequacy, and appropriateness of school inputs and infrastructure, identifies gaps that may hinder effective teaching and learning, thereby offering a basis for informed policy interventions and resource allocation targeted at improving learning outcomes and the quality of the learning environment;

c). The assessment of learner, teacher, head-

teacher, and school characteristics provides a comprehensive understanding of the contextual factors that influence learner achievement. These findings can help schools and stakeholders create more supportive and collaborative learning environments.

d). By determining the combination of school inputs associated with high learner achievement levels. The study provides evidence-based recommendations that can guide educational stakeholders and policymakers in optimizing resources and practices to improve learning outcomes.

e) The implementation of the Competence-Based Curriculum (CBC) and Competence-Based Assessment (CBA) offers valuable insights into the effectiveness, challenges, and outcomes of these educational reforms. This information can guide continuous improvement efforts, ensuring that the curriculum and assessment methods effectively support the development of learners' competencies.

f) Finally, the report will contribute to the body of knowledge on Monitoring Learner Achievement and inform research in the field.

1.10 Conceptual Framework

In this study, three variables namely learner characteristic, teacher characteristics, and school characteristics were hypothesized to influence learner achievement in Mathematics and English at Grade 3 as illustrated in figure 1. The school characteristics encompassed headteacher characteristics and the school environment.

Figure 1: NASMLA study conceptual framework

Source: NASMLA Framework

1.11 Research Design

This study adopted a convergent parallel mixed method design. In a parallel convergent mixed method, the researcher concurrently conducts both qualitative and quantitative elements in the same phase of the research process, weighs the methods equally, analyzes the two components independently, and interprets the results together (Creswell & Clark, 2018). During the study, achievement tests, school observation checklists, and questionnaires were administered to collect quantitative data on various variables. Qualitative data was collected through focused group discussions and open-ended questions in the questionnaires.

1.12 Target Population

The study targeted all Grade 3 learners in 2023 in the age-based curriculum and all learners at the foundation level in the stage-based curriculum across all the 47 counties in Kenya.

The collection of data also took care of the KPEEL program's focus on schools in 10 low-performing counties, schools for learners with special needs and disabilities, schools in urban informal settlements, schools in the refugee camps, and schools in refugee host communities.

1.13 Sample Size and Sampling Procedures

Sampling of schools: The study was conducted in 250 schools sampled using both random and purposive sampling methods. The Sample Design Manager (SAMDEM) software was used to randomly sample schools for the national sample while purposive sampling was used to sample schools taking the stage-based curriculum, schools in urban informal settlements, special needs education schools and additional schools in the 10 low performing counties to ensure adequate representation in the KPEEL program. The sampling frame was drawn from the KNEC database of schools that had learners in Grade 3. The number of schools sampled per category is presented in Table 1.

Table 1: Number of Schools Sampled Per Category

No.	Category of sample	No of schools
1.	National sample	170
2.	Refugee camp-based schools	5
3.	Additional schools in the ten low-performing counties based on the NASMLA 2018 study.	50
4.	Schools in the urban informal settlement	17
5.	Special schools in the age-based curriculum; 2 for Hearing Impairment, 2 for the Visually Impaired and 2 for the Physically impaired	6
6.	Special Schools in the stage-based curriculum. Schools with more than 10 learners	2
Total		250

From Table 1, the National sample comprised 170 schools sampled randomly using the SAMDEM software across the 47 counties. Of these, 14 were from the target low-performing schools. The purposive sampling added 50 more schools from the low-performing counties giving a total of 64 schools from this category; five (5) schools from the refugee camps (which comprises 10% of the total schools in the refugee camps of Dadaab, Kakuma and Kalobeyei settlement scheme); and 17 schools from the urban informal settlement in the following counties Mombasa, Kilifi, Machakos, Kajiado, Nairobi, Kiambu, Embu, Nyeri, Nakuru, Kericho, Uasin Gishu, Transnzoia, Kisumu and Kakamega as outlined in the KPEEL program. Further, purposive sampling was used to select 6 SNE schools following the age-based Curriculum, which comprised 2 VI, 2 HI, and 2PI, and two (2) schools following the Stage Based Curriculum. This gives the 250 schools which were sampled to participate in this study and were used to report nationally.

Sampling of Learners: A Simple random number table was used to sample 25 learners in Grade 3 in each of the sampled schools with learners between 26 and 250. Where a school had class sizes of up to 25 learners, all the learners participated. In schools with class sizes of more than 250 learners, systematic sampling was done to select the 25 learners who participated in the study.

Sampling of the other study respondents: Purposive sampling was used in sampling school heads and teachers teaching the assessed subjects at Grade 3. Six to eight parents/guardians with learners in Grade 3, were purposively sampled from each of the eleven (11) schools selected to participate in a focus group discussion.

1.14 Research Instruments

The research instruments were developed in line with the study objectives and the technical standards laid out in the NASMLA framework. The study utilized the following research instruments to collect data: a) assessment tools for Mathematics activities and English activities for learners following the age-based curriculum; b) assessment tools for Communication, Social, and Pre-literacy Skills and Pre-Numeracy Activities for learners following the stage based curriculum; c) questionnaires for learner, teacher, and headteacher; d) core competencies,

core values, Pertinent and Contemporary Issues (PCIs) and Education for Sustainable Development (ESD) for learners were assessed within the learner questionnaire; e) school observation checklists; f) focus group discussion guide and g) administrative tools (learner name form, manual for data collectors, and random number table).These tools were developed by a team of education experts from MoE, KNEC, KICD, KISE, TSC, Universities, CEMASTEA, KEMI, TTC, KEPSHA, KNAP, and teachers teaching at Grade 3.

1.15 Digitalisation of Research Instruments

Over the years, the main mode of assessment adopted by NASMLA studies has been pen and paper. This study adopted the use of technology in the administration of the assessment tools thus the developed research instruments were converted to digital format to be accessed by respondents through the National Assessment Centre (NAC) portal.

1.16 Field Trial

The Field Trial was conducted from 27th February to 2nd March 2023 in 20 sampled schools across 18 Counties. The 20 schools selected for the Field Trial had similar characteristics and reflected the geographical locations of the targeted population for the study. Item analysis using the Rasch Model/ Item Response Theory (IRT)-1 Parameter Logistic (1 PL), and Cronbach's alpha was used to assess reliability of the tools. The findings during Field Trial influenced the review of research instruments and the research process. Table 3 shows the reliability values for pilot and midline studies.

Table 2: Pilot and Midline Study Reliability Values

	Reliability Value	
Subject	Pilot Study	Midline Study
Mathematics Activities	0.8005	0.8223
English Activities	0.8446	0.8496

Table 2 shows that the reliability values for English and Mathematics activities were 0.8223 and 0.8496 respectively at midline. This is an improvement from the pilot study by 0.005 and 0.0218 in Mathematics and English activities respectively. According to Taber (2018), a generally accepted rule is that a reliability coefficient of between 0.6 - 0.7 indicates an acceptable level of reliability, and 0.8 or greater is a very good level.

Based on the findings of the pilot study, research instruments were reviewed. The review of the assessment tests was guided by expert judgement and item analysis using IRT to ensure validity of the assessment tools.

1.17 Data collection procedure

For the effective administration of the data collection exercise, the study used monitoring officers, regional coordinators, and data collectors. The 47 counties in the Republic of Kenya were divided into 18 regions and each region coordinated by two regional coordinators. The data collection process commenced with the training of regional coordinators and monitoring officers at a central location. The training mainly focused on how to contact data collectors; pack materials for the region; sample respondents; access, complete and submit online achievement tests and questionnaires; and return tools after the data collection exercise. The training also focused on the ethical consideration relevant to data collection in this study. The regional coordinators then trained the data collectors at the respective regions. The two data collectors assigned to each of the sampled schools comprised a person with an education background and a person with the requisite ICT skills. The actual data collection in the schools included sampling of learners and teachers, completing the learner's name form, administering assessments in Mathematics activities, and English

activities, administering questionnaires to learners, teachers, and headteachers, and filling out the school observation checklist by the data collector. The research instruments were administered electronically in two modes:

(a) Computer-Based Assessment (CBA) research instruments were administered and scored by computer, and with assistive technology (Orbit Reader 20) for learners with visual impairments.

(b) Computer Assisted Assessment (CAA) - learners and other respondents relied on PDF versions projected/ on computers and other electronic assistive devices for completion of assessment tools and questionnaires.

For the learners in the Stage Based Curriculum, teachers of Foundation Level downloaded and administered the tools in their respective schools. Comprehensive and user-friendly scoring guides were attached to the tools for ease of reference. These guides included observation checklists and rubrics which guided the teachers on how to rate the learners' performance. Scoring was done at the school level, and feedback was uploaded onto the KNEC portal.

KNEC provides Wi-Fi routers in schools without internet connectivity.

1.18 Data Analysis

The data were cleaned and analyzed using Structured Query Language (SQL) and STATA (version 18) to identify and address issues such as outliers and missing values in preparation for analysis. This task also involved categorization of variables to facilitate generation of desired outputs. Learner proficiency levels in English Activities and Mathematics Activities were analyzed in forms of means and percentages. Learner achievement in English and Mathematics was further analyzed to show learner competency levels in the various strands and sub-strands. Descriptive analysis done on the contextual data provided results on variables in the learners, teachers, and headteachers' questionnaires, and the school observation checklist. The analysis also captured the achievement of learners in different sub-groups such as special needs schools, and those outlined in the KPEEL program. The results were presented in pie charts, bar graphs, and tables disaggregated by gender, age, and counties.

Qualitative analysis was performed on two levels. In the case of primary data, audiotaped interviews were transcribed and translated. The transcripts were checked for accuracy and completeness by cross-checking with the audio recordings. Data were coded, thematically analyzed, and interpreted (Gale et al., 2013). To examine the factors associated with learner achievement, a multilevel analysis was conducted using Multiple Linear Regression (MLR).

1.19 Response Rates

Response rates for schools, headteachers, teachers, and learners are presented in Table 3 and 4.

Table 3: Response Rate for Schools, Headteachers and Teachers

	School		Headteachers		Teachers	
	Target	Actual	Target	Actual	Target	Actual
Sample	250	250	250	241	500	426
Percentage (%)	100.0	100.0	100.0	96.4	100.0	85.2

Table 3 shows that all 250 schools intended for the study were reached. The response rate for headteachers and teachers was 96.4% and 88.0% respectively.

The response rates for learners per subject and questionnaire are presented in Table 4

Table 4: Learners' Response Rate per Subject and Learners' Questionnaire

	Mathematics		English		Learner Questionnaire	
	Target	Actual	Target	Actual	Target	Actual
Sample	6259	5,365	6,250	5,313	6,250	5,449
Percentage (%)	100.0	85.8	100.0	85.0	100.0	87.2

A total of 5,365 and 5,313 Grade 3 learners took the test in Mathematics activities and English Language activities respectively. This represented a response rate of 85.8% and 85.0% respectively. In addition, 5,449 Grade 3 learners responded to the learner questionnaire, representing an 87.2% response rate. These response rates complied with the International Association for the Evaluation of Educational Achievement's (IEA, 2017) technical requirements for large-scale assessments.

CHAPTER TWO 2

LITERATURE REVIEW

2.0 Introduction

Concerns about learner achievement are closely tied to questions of quality, equity, and equality in education. Although the same competency levels are expected of all learners, the contexts in which they live and learn vary significantly. Research into learning outcomes must therefore begin by examining these varied contexts to identify existing disparities and then determine what targeted support learners need to meet common educational goals. This is because attaining these goals ultimately depends on addressing the specific needs arising from each learner's circumstances (Equity Education, 2019).

This chapter reviews aspects of learner achievement in English and Mathematics activities and the key factors that influence the achievement of the learning outcomes at end of lower primary education. These factors include learner and teacher contextual factors, the implementation of CBC and CBA, school input and infrastructure, and school management and community relations.

2.1 Achievement of High Order Competencies in English and Mathematics by Grade 3 Learners

One of the foci of this NASMLA Grade 3 study was to establish the levels and variations in the achievement levels of Grade 3 learners in Reading and Mathematics with reference to Global Proficiency Levels (GPFs). Reading and Mathematics were of interest because literacy and numeracy skills are essential for further learning and daily functioning. These basic skills are acquired at an early stage in the learning process. The SDG 4.1.1a indicator requires countries to track and report the percentage of children in grades 2 or 3 achieving minimum proficiency in Reading and Mathematics. According to Piper (2018), getting more children reading and doing Mathematics at the acceptable level is not just an education issue but a cornerstone for future economic prosperity and private sector growth. This gives impetus to the current study, which focuses on achievement of learning outcomes in English and Mathematics activities.

2.1.1 Defining Minimum Proficiency Levels

The Global Education Monitoring (GEM) Centre drives improvements in learning by supporting the monitoring of educational outcomes worldwide. The GEM report in 2022 outlined the refined minimum proficiency levels (MPLs) in Reading and Mathematics that learners need to achieve at the end of lower primary. This allows countries, despite the variation in educational systems, practices and conditions across the globe, to report on student achievement against globally comparable standards in response to SDG 4.1.1 indicators (ACER -GEM, 2022). These indicators require countries to report on the proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a MPL in (i) Reading and (ii) Mathematics, by sex.

In the area of literacy, because of variation in education systems, reading experts defined separate MPLs for Grade 2 and Grade 3, while mathematics experts reached a combined 'Grade 2/3' MPL definition. Because Kenya is a signatory to the UN Sustainable Development Goals, the review of these MPLs is important for this NASMLA study which focuses on assessing Grade 3 learner achievement in English and Mathematic activities.

For reading, at the end of lower primary school, the MPLs are set for three domains as outlined below:

a) Decoding: Read fluently short texts of one or

two sentences decoding most of the words including unfamiliar ones.

b) Reading comprehension: Retrieving information - identify the meaning of familiar words in a sentence; locate most pieces of explicit information within a sentence when the information is prominent and there is no or there is limited competing information.

c) Listening comprehension: Retrieving and interpreting information - in a longer text that is read aloud to them, learners identify key events, ideas and major characters, make simple inferences, and identify the meaning of key words that may be unfamiliar. The reading assessment tasks in this NASMLA study contained items which provide data on all three domains outlined in the MPL report.

For mathematics, at the end of lower primary school, the MLPs considered the following five domains:

a) Number and Operations: Whole numbers - Learners with minimum proficiency levels in these areas can:

- Count, read, write, compare, and order whole numbers up to 100.
- Represent quantities up to 100 concretely, pictorially, and symbolically.
- Solve addition and subtraction problems within 20 that are presented concretely, pictorially, and symbolically.
- Divide a group of up to 20 objects into 2 equal sets.
- Solve simple real-world problems using addition and subtraction facts within 20.

b) Measurement: Length, weight, capacity, volume, area and perimeter, time, and currency – Learners with minimum proficiency levels in these areas can:

- Use non-standard units to measure and compare length, weight, capacity, volume, area and perimeter.
- Tell time using a digital clock.
- Tell time using an analogue clock to the nearest hour.
- Recognize the number of days in a week and months in a year.
- Solve problems, including real-world problems, using a calendar.
- Count combinations of commonly used currency denominations. Combine commonly used currency denominations to make a specified amount.

c) Statistics and probability: Data management - Learners with minimum proficiency levels in these areas can compare categories of simple data displays with up to four categories and a single unit scale.

d) Geometry: Spatial visualizations, properties of shapes and figures, position and direction – Learners with minimum proficiency levels in these areas can:

- Compose/decompose a larger two-dimensional (2D) shape from a small number of given shapes without lines showing where the shapes go.
- recognize and name straight and curved lines and attributes of shapes.
- recognize when a 2D shape has been rotated or reflected.
- Interpret and use positional terms, and the terms left and right.

e) Algebra: Patterns - Learners with minimum proficiency levels in this area can extend non-numerical repeating patterns, recognize repeating units, and identify a missing element.

The test items in this study focused on the domains of numbers, measurements and geometry, which are the main strands in the Grade 3 curriculum design. eporting of learners' performance in the stage-based curriculum is anchored on UNESCO's Global Proficiency Framework (GPF) which outlines a maximum of four proficiency levels of reporting learner achievement in per-

formance-based tasks: exceeds, meets, partially meets and below partially meets expectations.

2.1.2 Achievement of Learning Outcomes in Literacy

For over 10 years, research focusing on the improvement of foundational reading/literacy in Kenya has been driven by findings that indicated that children sail through the education system without mastering the foundational literacy skills. For example, Wawire et al. (2024) analyzed 4,886 Grade 1-2 learners and found that many learners failed to master foundational skills like letter-sound knowledge and text reading fluency. Additionally, Crawford et al. (2024) reported data from over half a million pupils across 48 low- and middle-income countries (including Kenya) showing that pupils across the first three instructional years fail to acquire basic decoding skills and letter knowledge, which are foundational competencies needed for reading comprehension.

The Primary Math and Reading (PRIMR) initiative (2012-2014) conducted a baseline study in Class 1 and 2 before the start of the intervention using a variety of Early Grade Reading Assessment (EGRA) subtasks: letter sound fluency, non-word fluency, oral reading fluency, reading comprehension, and listening comprehension. The findings indicated that on average, across Class 2, only 5.1% of the learners could fluently read, where fluency was defined as ability to read 65 Correct Words Per Minute (CWPM). This level of fluency was statistically determined to reflect acceptable comprehension levels. Thus, learners who have mastered high order thinking skills are expected to perform at this level (USAID, 2012, p.2). Though PRIMR did not focus on the end of lower primary school, the findings give a grime picture of the competencies of the learners graduating into the last class of lower primary school.

At the end of the PRIMR project, the Ministry of Education scaled up the intervention as the *Tusome* intervention, and a baseline study was conducted in 2015/2016 in classes 1 and 2. The findings indicated that in Class 2, 35.8% of the learners were at zero- reader level, 27.6% at beginning, 23.1% at emergent and only 13.3% at fluent level. The scale up was externally evaluated in 2019 and the findings indicated a slight improvement in Class 2, with the non-readers having reduced from 35.8% to 14%, beginning readers increased from 27.6% to 32%, emergent readers increased from 23.1% to 32%, and fluent readers increase from 13.3% to 18% (USAID, 2020a). However, the findings of an Early Grade Reading Assessment (EGRA) study undertaken by *Tusome*, in collaboration with the Kenya National Examinations Council (KNEC), indicated learning loss. This NASMLA Grade 3 links with the USAID studies in that both focus on establishing learner achievements in reading at lower primary to inform intervention.

KNEC has regularly assessed the achievement of learning outcomes in English at the end of lower primary level. Generally, these studies have revealed low achievement of basic literacy skills among Class 3 pupils. In the 2016 study, only 28% of the learners demonstrated reading skills at level 4 (reading for meaning), which is the level associated with the ability to interpret and make inferences from what is read. This means that 71.4% did not demonstrate these high order thinking skills. The 2018 study registered a slight improvement with 42.1% of the learners performing at level 4. This again means that the number of learners not able to read for meaning accounted for 57.9% (KNEC, 2016, p.115; 2020, p.194). The Program Development Objective Indicator of the KPEEL is to track increase in the share of learners achieving high order competencies in literacy and numeracy (level 4). Thus, the findings of this study will indicate the progress made in achieving this target.

Further, both NASMLA 2016 and 2018 studies revealed gender disparities in the achievement of literacy skills among Class 3 learners. For example, in the 2018 study, the proportion of girls attaining the 50% score benchmark in English was higher than that of boys at 58.5% of the girls against 47.4% of the boys (KNEC, 2020a).

The 2019 Monitoring Learner Progress (MLP) Grade 3, a national census study, assessed learner achievement using items that were grouped into four tasks: listening and speaking /signing skills; reading aloud/ signing; reading comprehension skills and language structures; and writing skills. Learner performance in each of these tasks was scored using four levels: Below Expectation (level 1), Approaching Expectation (Level 2), Meeting expectation (level 3), and Exceeding Expectation (level 4). The proportion of learners performing at level 3 and above in all the tasks was commendable: listening and speaking were at 65%, reading aloud at 61%, reading comprehension and language structures at 51%, and writing at 47%. This, though, meant that 35%, 39%, 49%, and 53% of learners performed below 'meeting expectation' (below Level 3) in listening and speaking, reading aloud, reading comprehension and language structures, and writing respectively. Though MLP is a national census study, the 2019 findings provide a basis of determining whether there is positive progress in the proportion of learners achieving learning outcomes in English (KNEC, 2019).

The 2022 MLP reported on the same skills but grouped the tasks differently to separate reading comprehension and language structures. The proportion of learners performing at level 3 and above nearly matches the 2019 performance in all the tasks: listening and speaking were at 65.3%, reading aloud at 60.3%, reading comprehension at 55%, grammar at 54%, and writing at 44%. This flags out 35%, 40%, 45%, 46%, and 56% of learners who have not attained the 'meeting expectation' level (Level 3) in listening and speaking, reading aloud, reading comprehension, grammar, and writing respectively (KNEC, 2022).

2.1.3 Achieving numeracy outcomes

A 2018 KNEC study conducted across 250 schools in Kenya assessed the numeracy achievement levels of Class 3 learners and uncovered significant competency gaps. A striking 94.6% of pupils failed to attain Level 4 competencies, which required the ability to translate information into simple arithmetic operations, while more than half (57.9%) did not attain Level 3 competencies, which involved solving word problems requiring translation of information into one arithmetic operation. These findings pointed to serious weaknesses in higher-order thinking skills among learners and prompted the study to recommend effective monitoring of curriculum implementation, with emphasis on the use of appropriate pedagogies that enable learners to acquire higher-order thinking skills in both numeracy and literacy.

To further examine numeracy achievement among Kenyan learners, KNEC conducted an Early Grade Mathematics Assessment (EGMA) among Grade 2 learners in 2020, focusing on the 'Numbers' domain with a 50% benchmark for success. The findings showed that learners performed reasonably well in some areas, with 83.0% meeting the benchmark in addition, 81.9% in subtraction, 75.5% in number patterns, 61.4% in division and 60.9% in multiplication. Achievement was further analyzed across six competency levels, ranging from basic numeracy skills at Level 1 to higher-order thinking skills at Level 6. While 73.2% of learners achieved Level 1 competency, 67.7% attained Level 6, meaning a considerable 32.3% of pupils did not master higher-order numeracy skills. This gap provided clear justification for the KPEEL interventions targeting the affected counties.

A 2025 study by Tolibas in the Philippines similarly underscored the importance of mathematical proficiency in the early grades as a foundation for subsequent learning. Using a Rapid Mathematics Assessment (RMA) and a descriptive survey design, the study assessed 222 Grade 1 to 3 learners at a public elementary school in the DepEd Tacloban City Division, categorizing them into five proficiency levels ranging from Non-Proficient to Highly Proficient. The results revealed that the majority of students fell within the Emerging categories of Low Proficient and Non-Proficient, with very few attaining Highly Proficient levels. These findings underscored the urgent need for targeted interventions, and the study concluded that early intervention programs and evidence-based instructional strategies are essential for building strong foundational mathematics skills and preparing learners for

higher-level mathematical concepts.

A related study by Montes (2025) assessed factors affecting numeracy skills among Grade 1 to 3 students of Canloterio Elementary School during the 2023–2024 school year and found that students experienced considerable difficulties in answering questions requiring numeracy understanding, particularly those involving fundamental calculations and problem-solving. The study identified several strategies that could strengthen learners' numerical abilities, including worksheet-based learning, which was found to enhance critical thinking skills, and Team Accelerated Instruction (TAI), which further develops numerical critical thinking. The use of visual learning media was also highlighted as a beneficial approach. The study recommended that learners be familiarized with critical thinking strategies to help them solve problems in real-life contexts, and that teachers consistently utilize worksheet-based learning to foster improved critical thinking and numeracy skills among their students.

2.2 Learner and Teacher Characteristics, and the Achievement of Learning Outcomes

The assessment of learner and teacher characteristics factors in relation to the achievement of learning outcomes has been a central focus in educational research and policy formulation. Empirical studies have consistently highlighted the interplay between learner characteristics, teacher attributes, and the overall learning environment in determining achievement of learning outcomes.

2.2.1 Learner characteristics

Research consistently shows that learner characteristics and contextual factors significantly shape academic outcomes. Socioeconomic status (SES) is among the most influential determinants, with studies by Munir et al. (2023) and Sirin (2015) demonstrating that students from low socioeconomic backgrounds tend to underperform compared to their wealthier peers, largely due to limited access to resources and reduced motivation. These findings underscore the need to examine how equitable resource distribution under programs like KPEEL can help reduce learning disparities and informed the current study's focus on how SES variations across KPEEL target counties influence learner achievement.

Grade repetition is another factor with well-documented negative consequences for learning. PISA (2018) and USAID (2020b) both found that repeating a grade is associated with poor learning outcomes, with the effects being more severe among vulnerable groups including girls, immigrants, and students from disadvantaged backgrounds. These insights informed the current study's investigation into the prevalence and impact of grade repetition within KPEEL target counties, with a view to identifying targeted interventions that can support at-risk learners.

Absenteeism similarly undermines academic performance. Studies by Daka (2021) in Zambia and Mbaruku and Otieno (2022) confirm that irregular school attendance negatively affects exam scores and overall academic progress, with consistent pupil-parent-teacher engagement identified as an effective intervention. This evidence provided a basis for the current study to assess the extent to which absenteeism contributes to low learning outcomes in the KPEEL program areas and the strategies that could be employed to improve attendance.

Nutrition also plays a role, as evidence from Reeder et al. (2022) suggests that school feeding programs positively correlate with improved enrollment, attendance, and test scores. This reinforces KNEC's (2020) position that irregular eating adversely affects learner health and achievement. The current study drew on these findings to examine the extent to which access to school meals influences learning outcomes among primary school learners in the KPEEL target counties.

Beyond these factors, learner discipline and inter-

est have been shown to enhance academic performance. Trinova et al. (2022) found that students who demonstrate high levels of discipline and intrinsic interest achieve better learning outcomes, consistent with the expectations set out in Kenya's Basic Education Act 2013. The current study therefore sought to establish how learner discipline within KPEEL schools relates to the achievement of expected learning outcomes, and whether existing frameworks adequately support its promotion.

Finally, learners with special needs face unique barriers to participation in educational and social activities. Chandra (2021) emphasizes that learning disabilities can limit learners' engagement across multiple domains, and that targeted support from both parents and teachers is essential to help these learners achieve their expected outcomes. These findings informed the current study's examination of how learners with special needs are being supported within the KPEEL program, and the degree to which existing support systems are enabling them to meet their learning goals.

2.2.2 Teacher characteristics

Teachers play a crucial role in shaping student learning outcomes, with their experience, pedagogical skills, subject knowledge, and classroom management practices collectively influencing learner achievement. Piper et al. (2018), in a study conducted in Kenya, found that experienced teachers demonstrated superior classroom management and instructional strategies, which translated into improved reading fluency among Grade 3 learners. This underscores the significance of teaching experience as a foundational factor in effective instruction.

Beyond experience, a teacher's pedagogical orientation has been shown to meaningfully impact student learning. Tang (2023) emphasized the importance of student-centered teaching approaches in early grades, arguing that student-centered feedback fosters active learning while adaptive teaching engages students in content-building, ultimately promoting academic performance. Complementing this perspective, Talento (2024) asserts that systematic student evaluation plays a key role in shaping effective teaching strategies by providing continuous feedback on learning outcomes. The study further highlighted the critical importance of individualized instruction in improving students' numeracy skills and preventing future academic challenges, recommending ongoing professional development to ensure teachers remain proficient in current and effective teaching methodologies. This aligns with the African Union's Continental Education Strategy for Africa (CESA, 2016), which prioritizes teacher professional development as a mechanism for enhancing learning outcomes across the continent.

A teacher's subject knowledge is equally significant in influencing learner achievement. Hill et al. (2019), drawing on data from approximately 300 fourth- and fifth-grade teachers, established that participation in mathematics content and methods courses specifically predicted student outcomes, alongside teaching experience and content knowledge. This finding is reinforced by Susuoroka et al. (2023), whose regression analysis and ANOVA revealed that teachers' expertise, instructional methods, classroom management skills, motivation, satisfaction, and professional interest significantly influence mathematics performance, with classroom management and instructional methods emerging as particularly strong predictors of academic achievement.

Taken together, these studies demonstrate that teacher effectiveness is not determined by any single factor but is instead the product of an interplay between experience, pedagogical skill, subject knowledge, and professional development. These findings directly informed the current study by providing a conceptual basis for examining how these teacher-related variables influence learner performance in the study context.

2.3 Implementation of Competency Based Curriculum (CBC) and Competency Based Assessment (CBA)

Curriculum serves as the primary vehicle through which a nation equips its citizens with the knowledge, skills, attitudes, and values needed for personal and national development (Kabita & Lili, 2017). Competency based education (CBE) emerges from this imperative, as countries reform their education systems to better achieve these goals. This section reviews literature on CBE implementation, within which CBC and CBA are situated.

2.3.1 Implementation of Competency Based Curriculum

The global adoption of CBE has generated substantial evidence on its implementation across diverse educational contexts. In Peru, Solis (2020) found that CBC significantly shifted teachers toward student-centered, constructivist practices, with formative assessment emerging as a central element of the learning process. This shift represented a fundamental departure from traditional teacher-centered instruction, requiring teachers to reframe their roles as facilitators of learning rather than mere transmitters of knowledge. Similarly, Ankirinola et al. (2020), studying Rwanda, South Africa, and Nigeria, reported that teachers embraced learner-centered approaches such as demonstrations, practical activities, and group discussions, recognizing CBE's value in preparing learners for a competitive workforce. The researchers noted that when teachers internalized the philosophy underpinning CBE, they were more likely to adopt innovative pedagogical strategies that fostered critical thinking and problem-solving among learners. These findings underscore that teachers' understanding and application of competency based approaches are critical to successful CBE implementation, and that attitudinal change is as important as procedural compliance.

However, implementation challenges are equally well-documented, particularly around teacher readiness. In Zambia, Kabombwe et al. (2019) found that 67% of teachers did not understand the competency-based curriculum concept, attributing this to inadequate knowledge and skills, and recommended strengthened in-service training. This statistic suggests that curriculum reform without corresponding investment in teacher capacity building is unlikely to yield meaningful change in classroom practice. In Uganda, Kidega et al. (2023) identified broader systemic challenges, including insufficient resources, limited stakeholder involvement, weak supervision, and policy misalignment, recommending government intervention through teacher training and provision of instructional materials. The Ugandan experience further illustrates that CBC implementation cannot be reduced to curriculum design alone but must be accompanied by coherent policy frameworks, adequate funding, and sustained institutional support. These studies collectively highlight that teacher preparedness and systemic support are fundamental prerequisites for effective CBC implementation across varying national contexts.

Kenya's CBC implementation reflects similar dynamics, with progress tempered by persistent structural challenges. Muchira et al. (2023), drawing lessons from the United States and South Korea, emphasized that teacher preparedness and effective evaluation of training programs are critical, recommending collaboration between the Department for Early Learning and Basic Education, the Teachers Service Commission, and teacher training institutions. The study further suggested that Kenya could benefit from adopting federal grant models like those used in the United States, where universities and colleges were funded to develop competency-based teacher training programs in direct response to identified gaps. Ogembo (2025) confirmed that while CBC had progressed to Junior School level by 2025, it continued to face challenges including teacher competence gaps, inadequate infrastructure, insufficient curriculum materials, and weak policy frameworks. The continuous revision of curriculum materials, while necessary to incorporate emerging knowledge, had also created

instability that complicated planning and delivery at the school level. Ngeiywa and Mangana (2023) further noted that unprepared teachers, resistance to change, and limited resources remained persistent barriers, stressing the importance of stakeholder engagement and strategic resource allocation to consolidate the gains already made.

Beyond teachers, other stakeholders also play a significant role in shaping CBC outcomes. Mwarari et al. (2020) established that while parents recognized the value of home-school collaboration, barriers such as limited time, inadequate CBC knowledge, and lack of resources hindered effective parental involvement, recommending targeted orientation and training programs. Given that CBC places considerable emphasis on learning beyond the classroom, parents who are not adequately equipped to support their children at home risk undermining the curriculum's holistic development objectives. Additionally, Owino et al. (2022) found that while a positive correlation exists between teachers' ability to adapt instructional methods and effective CBC implementation for learners with disabilities, such adaptations were rarely practiced in regular classrooms, undermining inclusive education goals. This gap points to a need for more specialized professional development that equips teachers with practical skills to differentiate instruction and accommodate diverse learners within mainstream settings. Together, these studies highlight that successful CBC implementation requires not only teacher capacity but also active parental engagement and robust inclusive education strategies that leave no learner behind.

2.3.2 Implementation of Competency Based Assessment

Competency-based education emphasizes formative assessment as a means of gathering data during the learning process to inform both teachers and learners and ultimately improve outcomes. However, research consistently shows that teachers struggle to implement formative assessments effectively. Solis (2020) found that while teachers in Peru were familiar with formative assessment approaches, their actual practices relied heavily on traditional tools that did not align with formative assessment principles. Feedback was particularly undervalued, as teachers perceived students to be inattentive to comments and found feedback provision time-consuming. These challenges echo findings by Gelbal and Kelecioglu (2007), who identified knowledge gaps, time constraints, and overcrowded classrooms as barriers to adopting newer assessment techniques such as anecdotal records, underscoring the need for targeted teacher training.

Over and above tool selection, the quality of assessment also remains a concern. Hagenimana et al. (2023), studying English teachers in Rulindo District, Rwanda, found that teachers predominantly relied on clarifying questioning strategies and that most assessments targeted only lower-order thinking skills, with few questions designed to assess higher-order thinking. This points to a need for greater variation in assessment strategies and broader coverage of cognitive levels.

A similar pattern emerges regarding the range of assessment tools in use. Macheso et al. (2024) investigated competency-based assessment tool utilization across Trans-Nzoia, Bungoma, and Busia counties, finding that teachers predominantly used written tests, oral questions, rubrics, and portfolios, while tools such as questionnaires, journals, anecdotal records, and rating scales were rarely employed. Taken together, these studies reveal a persistent gap between competency-based assessment policy and classroom practice, with teachers defaulting to familiar methods at the expense of a more diverse and effective assessment practices.

2.4 Influence of school input and infrastructure on quality education

Research shows that availability, adequacy and appropriateness of school inputs and infrastructure contribute to conducive learning environments that ultimately have a positive influence on learning

outcomes and education quality.

2.4.1 Learning environment

Research shows that the availability and adequacy of school inputs and infrastructure significantly influence learners' academic outcomes. Kitonyi (2013), in a study conducted in Kaiti Division, Makueni County, found that factors such as classroom conditions, teaching and learning materials, sanitation facilities, and ventilation directly affect student achievement, with poor physical environments negatively impacting learning outcomes. These findings underscore the importance of investing in functional and well-resourced school environments.

Moreover, the provision of qualified teachers and appropriate learning resources is equally critical. Studies from Nigeria and Ghana demonstrate that smaller class sizes and lower pupil-teacher ratios (PTR) lead to greater student engagement, improved teacher attention, and higher academic performance (Ajiboye & Oke, 2014; Agyapong & Okyere, 2021). In the Kenyan context, Kamoet and Mbirithi (2024) corroborate these findings, establishing that reduced class sizes and lower PTRs foster individualized instruction, effective pedagogy, and improved learner performance in Mombasa County.

Instructional materials, particularly textbooks, also play a pivotal role in learner achievement. Mwikali et al. (2024) found that textbook availability strongly influenced academic performance and recommended their effective utilization as a key strategy for improving outcomes. Building on this body of evidence, the present Grade 3 NASMLA study sought to determine whether the availability, adequacy, and appropriateness of school inputs and infrastructure influence learning outcomes.

2.4.2. Physical infrastructure

Research demonstrates that physical infrastructure significantly shapes student learning outcomes. Barrett et al. (2015) found strong evidence of this relationship across three UK regions, a finding echoed by Mokaya (2013), who linked improved academic achievement to well-spaced classrooms, adequate library and laboratory facilities, water and sanitation, and co-curricular participation. Fernandez (2023) further confirmed that school infrastructure adequacy correlates with both student behaviour and academic performance. In Latin America, Cuesta et al. (2016) similarly established that libraries, laboratories, toilets, and access to drinking water drive increased enrolment and better learning outcomes. These findings informed the present study's examination of how infrastructure conditions affect learner performance.

For learners with disabilities, the quality and appropriateness of physical facilities carry particular significance. The Kenya Ministry of Education (2018) policy mandates that physical structures be adequate, appropriate, and risk-free for all users. However, Oluremi and Olubukola (2012) found glaring gaps in southwest Nigeria, where schools lacked handrails, adapted toilets, and functional assistive materials, and established a significant relationship between facility availability and the academic performance of learners with special needs. Nyangoya et al. (2020) corroborated this in Kisumu County, Kenya, finding a statistically significant positive relationship between adapted physical facilities and the academic achievement of learners with physical impairment in special schools. These findings highlighted the persistent gap between policy intent and on-the-ground reality, an issue the current study sought to interrogate within its own context.

Access to recreational facilities and assistive resources also plays a meaningful role in learning outcomes. Ngala et al. (2020) found that many schools lacked play equipment and assistive technologies such as talking braille devices for learners with disabilities and concluded that the availability of recreational and instructional resources significantly influenced the retention and achievement of pupils with disabilities in mainstream schools.

This evidence suggests that holistic infrastructure provisioning, encompassing both academic and recreational resources, is essential for inclusive education, a consideration that shaped the current study's focus on the full range of physical facilities available to learners with special needs.

2.4.3 Water Sanitation and hygiene

Access to safe, clean, and sufficient water and sanitation facilities plays a crucial role in promoting good hygiene practices among school-aged children. When these basic needs are met, learners experience better health outcomes, reduced disease transmission, and improved school attendance, all of which ultimately contribute to enhanced academic performance. This relationship between WASH (Water, Sanitation, and Hygiene) conditions and learning outcomes is well supported in the literature. For instance, UNICEF (2018) conducted a systematic review of studies on sanitation in low-income countries and found that adequate water and sanitation infrastructure, combined with improved WASH knowledge, attitudes, and hygiene behaviours among students, contributed to better health, higher enrolment rates, regular school attendance, and positive learning outcomes.

These findings are further reinforced by Waga (2013), whose study on rural public primary schools similarly demonstrated that the availability of safe drinking water and sanitation facilities, the provision of handwashing stations, and hygiene education all positively influenced pupil performance. Building on these findings, the study recommended that governments and stakeholders prioritize WASH programmes during budget planning, mobilize funding from alternative sources to support programme implementation, and promote the establishment of WASH clubs in schools as a means of helping pupils acquire and sustain positive hygiene knowledge and practices.

2.5 School management and community relations

Effective school management practices are fundamental to improving educational outcomes. This section reviews literature, policy and legal frameworks guiding school management and their implications for schools in Kenya.

2.5.1 School management practices

The Education 2030 Framework for Action, led by UNESCO (2017), underscores the importance of strong governance and accountability mechanisms in school management as essential drivers of improved learning outcomes. Building on this global mandate, Bush and Glover (2016) found in their South African study that school leadership, teacher professionalism, and parental engagement are key components of effective management systems that contribute to improved learner performance. These findings resonate beyond the African context, as Fullan's (2020) research in North America similarly demonstrates that collaborative leadership models enhance teacher engagement and student outcomes. Further corroboration comes from Asia, where Cheng and Mok (2018) affirm that school autonomy, coupled with robust accountability mechanisms, contributes to better learner achievement.

Narrowing the focus to the East African context, comparable themes emerge in the literature. Waweru and Muthee (2021) and Ssekakubo et al. (2020), whose research was conducted in Uganda, both highlight the critical role of headteacher training and strategic resource allocation in shaping school effectiveness. Complementing these findings, Nyaga et al. (2022) reinforce the global consensus on parental involvement, identifying it as a key determinant of early-grade success in the region. Taken together, this body of evidence suggests that effective school management, whether examined globally or locally, consistently converges around the principles of accountable leadership, professional development, and community engagement.

CHAPTER THREE 3

LEARNER ACHIEVEMENT

3.1 Introduction

This chapter presents and discusses the score distribution and learners' performance in English language activities and Mathematical activities categorized by school category, sex, age, school type and counties. It presents performance in terms of proficiency levels, mean score and content/ skill areas of Grade 3 learners.

The chapter also presents the achievements of foundation level learners in Communication Social and Preliteracy skills and pre-numeracy skills. It provides a comparative analysis of the findings from Baseline and Midline Studies. In addition, it analyses how the performance of grade 3 learners in the learning areas is affected by different factors.

3.2 Task description

Achievement of Grade 3 learners in this study was measured using assessment tools for English Language Activities and Mathematical Activities.

3.2.1 English Language Activities

English is learnt as a second language and functions both as an official language and the medium of instruction from Grade 4. Consequently, the learner must be exposed to targeted interactive tasks in the four language skills and language use to become a proficient user of English by the end of the Early Years Education. Additionally, the learner should be able to progressively demonstrate the expected range of competencies.

The assessment comprised listening and speaking, language use and reading comprehension. The tasks were anchored on the competency-based curriculum designs for English Language activities which outline the learning outcomes to be achieved by the end of Early Years Education.

Table 6: Competencies tested in English Language Activities

Levels	Items	Competency Tested	Aspect Targeted	Alignment to GPF	Expected Minimum Benchmark	% of learners achieving minimum benchmark
Level 1	NR001, NR023, NR024, NR028	respond to inferential questions for comprehension; respond to Yes/No questions; use different forms of the verb "do" to construct simple sentences; use demonstratives to talk about things that are near and far	Inference; Yes/ No questions; Yes/No questions; Demonstratives	R2.2.1; R1.3.1; R1.3.1; R2.2.1	50% of items scored correctly	84.7

Levels	Items	Competency Tested	Aspect Targeted	Alignment to GPF	Expected Minimum Benchmark	% of learners achieving minimum benchmark
Level 2	NR004, NR005, NR009, NR011, NR012, NR013, NR019, NR025, NR027	respond to direct questions to check for understanding; respond to inferential questions for comprehension; make predictions and anticipate possible outcomes in a story for comprehension; make predictions and anticipate possible outcomes in a story for comprehension; respond to inferential questions for comprehension; respond to inferential questions for comprehension; use prepositions to describe position location and direction; use of conjunctions in sentences; use quantifiers in sentences	Direct; Inference; Prediction; Inference; Prediction; Inference; Simple prepositions; Conjunctions; Quantifiers	R1.2.1; R2.2.1; R2.2.1; R2.2.1; R2.2.1; R2.2.1; R2.2.1; R1.2.1; R1.3.1	50% of items scored correctly	64
Level 3	NR007, NR008, NR010, NR015, NR017, NR020, NR022, NR026, NR029, NR030, NR021, NR003	Infer meaning of new words from context; Infer meaning of new words from context; infer meaning of new words from context; make predictions and anticipate possible outcomes in a story for comprehension; use comparatives and superlatives for effective communication; use prepositions to describe position location and direction; use Wh- questions in sentences; use conjunctions in sentences; use demonstratives to talk about things that are near and far; use adverbs of place to describe the position of objects and people; use prepositions to describe position location and direction; respond to direct questions to check for understanding	Direct; Vocabulary; Vocabulary; Prediction; Comparatives and superlatives; Simple prepositions; WH- questions; Conjunctions; Demonstratives; Adverbs of place; Simple prepositions; Direct	R1.2.1; R2.1.1; R2.1.1; R2.2.1; R1.3.1; R2.2.1; R1.3.1; R1.2.1; R2.2.1; R2.2.1; R1.3.1; R1.2.1	50% of items scored correctly	57.5
Level 4	NR002, NR006, NR014, NR016, NR018	Infer meaning of new words from context; Infer meaning of new words from context; respond to direct questions to check for understanding; respond to inferential questions for comprehension; use comparatives and superlatives for effective communication	Vocabulary; Vocabulary; Direct; Prediction; Comparatives and superlatives	R2.1.1; R2.1.1; R1.2.1; R2.2.1; R1.3.1	50% of items scored correctly	41.4

From Table 6, it is notable that Level 1 items assessed basic skills such as responding to inferential and Yes/No questions, constructing simple sentences using forms of the verb *"do,"* and using demonstratives to describe near and far objects. These targeted Inference, Yes/No questions, and Demonstratives aligned to GPF standards (R2.2.1; R1.3.1). A high proportion of learners (84.7%) achieved the minimum benchmark of 50% of items scored correctly, indicating strong foundational comprehen-

sion and language skills.

It is also observable that Level 2 assessment items tested skills including responding to direct and inferential questions, making predictions in stories, and using prepositions, conjunctions, and quantifiers in sentences. These targeted Direct comprehension, Inference, Prediction, and basic grammar structures. 64% of learners met the benchmark, showing moderate mastery as task complexity increased.

The findings further revealed that Level 3 items assessed more advanced skills such as inferring word meaning from context, making predictions, using comparatives and superlatives, WH-questions, conjunctions, demonstratives, adverbs of place, and prepositions. These targeted Vocabulary development, comprehension, and grammatical structures. At this level, 57.5% of learners achieved the benchmark, indicating further decline as language and comprehension demands increased.

At Level 4 the focus was on higher-level skills including inferring word meaning from context, responding to direct and inferential questions, and using comparatives and superlatives effectively. Only 41.4% of learners met the benchmark, highlighting difficulties with advanced vocabulary and higher-order comprehension skills.

The findings show that learners demonstrate strong performance in basic comprehension and simple language structures but show declining achievement as tasks require deeper vocabulary knowledge and more complex language use, indicating a need for strengthened instruction in vocabulary development and higher-order comprehension skills.

3.2.2 Mathematical Activities

The competencies acquired by the learner in Grade 3 in Mathematical Activities enable the learner to develop an understanding of numbers, logical thinking skills and problem-solving abilities.

In Mathematical Activities, the achievement was measured using 30 multiple choice questions. The assessment tool had tasks drawn from the three strands namely: Numbers, Measurements and Geometry in Grades 1, 2 and 3 Mathematical Activities curriculum designs. The items were weighted according to the number of lessons for each strand, i.e. Numbers (64%), Measurements (28%), and Geometry (8%). The tasks were anchored on the competency-based curriculum designs for Mathematical Activities which outline the learning outcomes to be achieved by the end of Early Years Education.

Table 7: Competencies tested in Mathematical Activities

Levels	Items	Competency Tested	Aspect Targeted	Alignment to GPF	Expected Minimum Benchmark	% of learnes achieving minimum benchmark
Level 1	NM004, NM005, NM015, NM027	Adding numbers with single regrouping; Identifying missing number in a pattern; Working out missing numbers in a pattern; Carrying out shopping activities involving balance	Numbers; Numbers; Numbers; Measurement	N1.3.4; N1.1.2; N1.1.3; M3.1.3	50% of items scored correctly	84.6
Level 2	NM002, NM006, NM008, NM009, NM010, NM012, NM013, NM026, NM028, NM029	Identifying place value; Identifying part of a whole; Identifying part of a group; Adding numbers without regrouping; Adding 3 single digits; Adding two 3- digit numbers with single regrouping; Subtracting up to 3- digit numbers with single regrouping; Counting money in different denominations up to sh.1000; Carrying out shopping activities; Turning to the right from a point	Numbers; Numbers; Numbers; Numbers; Numbers; Numbers; Numbers; Measurement; Measurement; Geometry	N1.2.4; N2.1.1; N2.1.3; N1.3.1; N1.3.1; N1.3.4; N1.3.4; M3.1.2; M3.1.3; G3.1.3	50% of items scored correctly	79.5

Levels	Items	Competency Tested	Aspect Targeted	Alignment to GPF	Expected Minimum Benchmark	% of learnes achieving minimum benchmark
Level 3	NM001, NM003, NM011, NM014, NM017, NM018, NM020, NM021, NM022, NM023, NM024, NM025, NM030	Ordering numbers; Writing numbers in words; Multiplying single digit numbers; Find the missing value in a number sentence using addition and subtraction of numbers; Representing division as equal sharing; Showing relationship between multiplication and division; Showing relationship between multiplication and division; Subtracting mass in kilograms; Subtracting capacity in litres; Subtracting time involving hours and minutes; Adding capacity in litres; Writing time using 'past' and 'to' the hour; Making patterns involving rectangles, triangles, ovals	Numbers; Numbers; Numbers; Numbers; Numbers; Numbers; Numbers; Measurement; Measurement; Measurement; Measurement; Geometry	N1.1.2; N1.1.2; N1.3.3; A3.2.3; N1.3.3; N1.3.3; N1.3.3; M1.1.4; M1.1.4; M2.2.3; M1.1.4; M2.1.3; A1.1.2	50% of items scored correctly	53.3
Level 4	NM007, NM016, NM019	Identifying part of a group; Multiplying single digit numbers; Subtracting length in metres	Numbers; Numbers; Measurement	N2.2.5; N1.3.3; M1.1.4	50% of items scored correctly	26.8

From Table 7, it is observable that Level 1 items assessed basic skills like adding with single regrouping, identifying missing numbers, and simple shopping tasks. At this level, the aspects targeted were Numbers and Measurement aspects (GPF: N1.3.4; N1.1.2; N1.1.3; M3.1.3) of which 84.6% of learners met the minimum benchmark (50% correct), showing strong foundational skills.

It is also notable that Level 2 tested place value, addition/subtraction, counting money, and basic geometry. The level targeted Numbers, Measurement, and Geometry, and 79.5% of learners met the benchmark, indicating good mastery of slightly more complex concepts.

It was further revealed that Level 3 covered ordering numbers, multiplication, division, number sentences, and measurement of mass, capacity, and time. The targeted aspects were Numbers, Measurement, and Geometry. Only 53.3% of learners reached the benchmark, showing declining performance with increased complexity.

Notably, Level 4 items focused on identifying parts of a group, multiplication, and subtracting length. The level focused on Numbers and Measurement. The findings revealed that only 26.8% of learners met the benchmark, highlighting challenges with higher-order numeracy tasks.

Overall, learners excelled in basic numeracy and simple measurement but struggle with complex, multi-step problems, indicating a need for targeted support at higher competency levels.

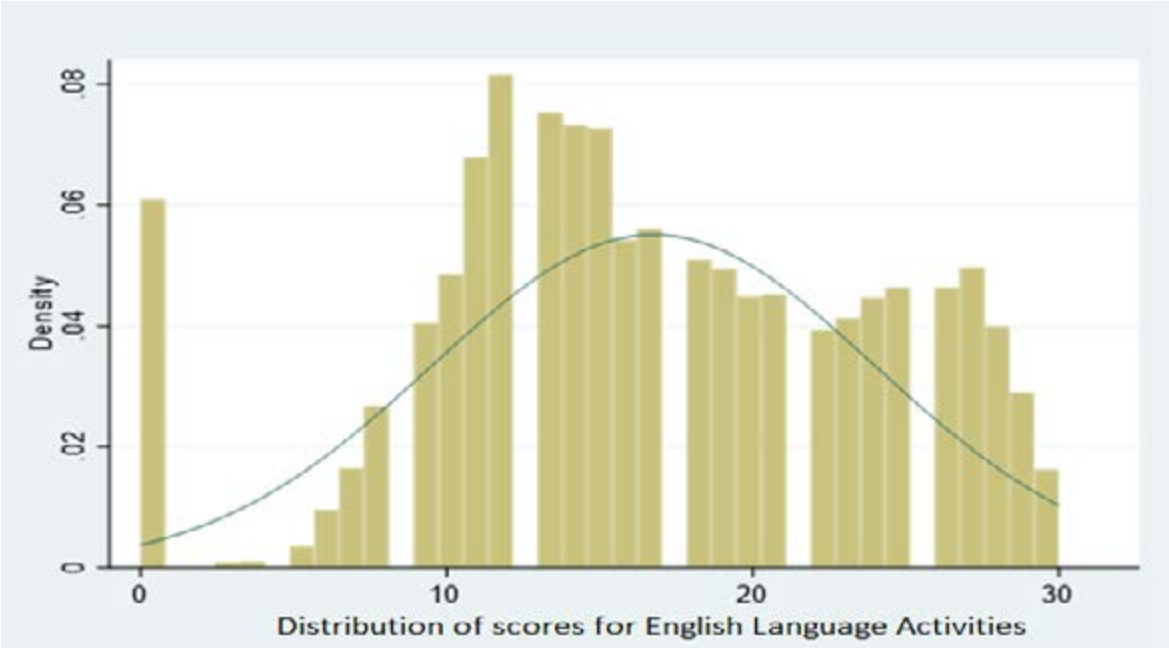
3.3 Distribution of scores

The figures below present learners' score distribution for English Language Activities and Mathematical Activities.

a) **English Language Activities**

The distribution of scores for English Language Activities is presented in Figure 2.

Figure 2: Distribution of Scores for English Language Activities

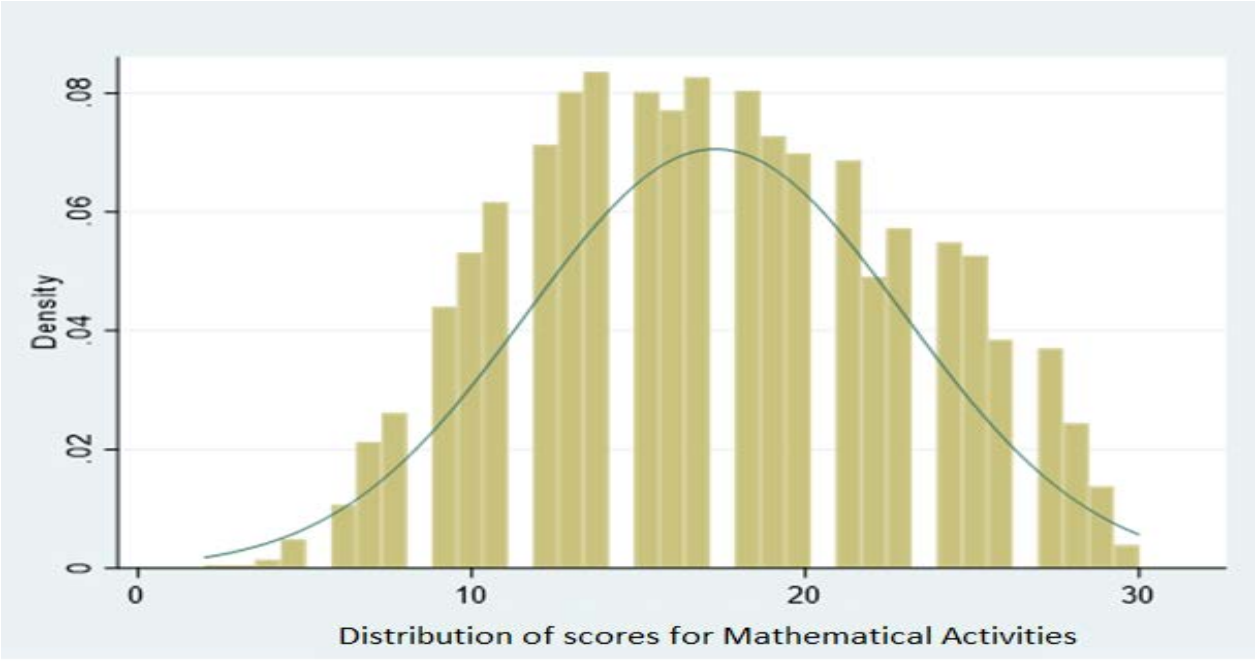


From Figure 2, it is observable that the distribution is negatively skewed, meaning more scores were concentrated on the right side of the distribution. More learners had higher scores, while few had lower scores.

b) **Mathematical Activities**

The distribution of scores for Mathematical Activities is presented in Figure 3.

Figure 3: Distribution of scores for Mathematical Activities



From Figure 3, it is observable that the distribution is negatively skewed, meaning more scores were concentrated on the right side of the distribution. More learners had higher scores, while fewer learners had lower scores.

3.4 Learners' Achievement of minimum proficiency at different levels

The study provides findings on the proportion of learners that performed at a 50% benchmark in each of the four proficiency levels in English Language Activities and Mathematical Activities.

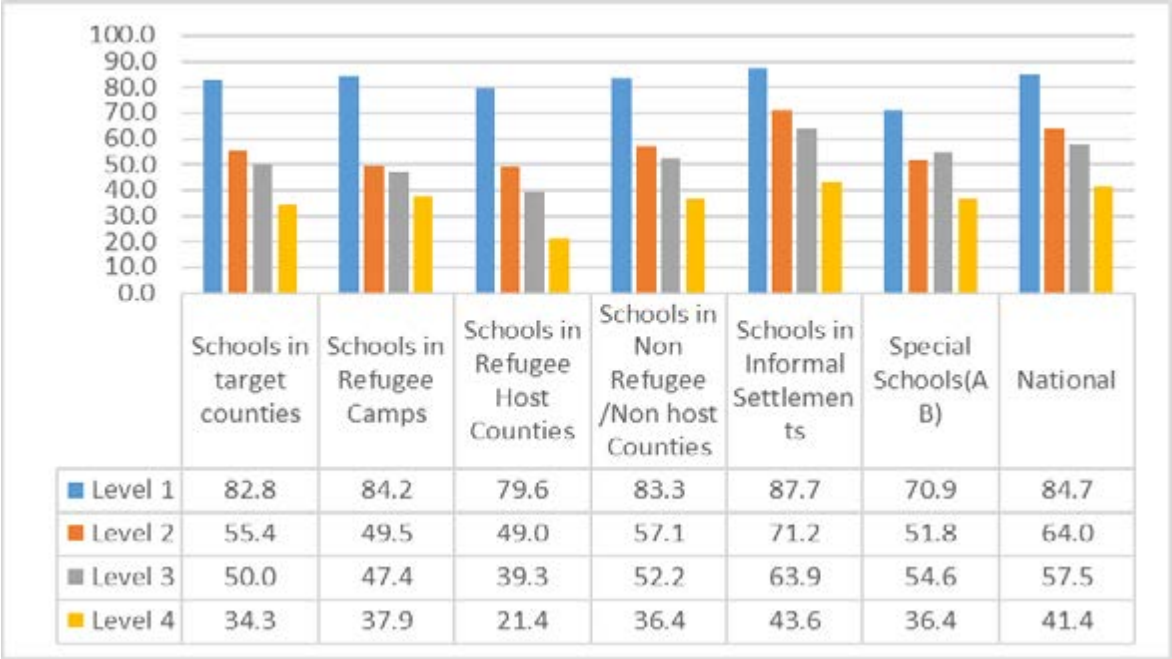
3.4.1 Learners' achievement of minimum proficiency in English Language Activities at different levels

The assessment items were categorized into four proficiency levels with a benchmark of 50%. Level 1 items tested the ability to respond to direct questions to check for understanding and make simple inferences in a grade-level text by relating pieces of explicit and/or implicit information in the text. Level 2 items required learners to use familiar words to complete simple everyday sentences. These questions tested the ability of learners to infer meaning of new words from context to Yes/No questions as well as use different forms of the verb "do" to construct simple sentences. Items at Level 3 tested learners' use of demonstrative pronouns in sentences, comparatives and superlatives, adverbs, prepositions, quantifiers in sentences, Wh- questions and conjunctions in sentences. Level 4 items required learners to make predictions for possible outcomes for comprehension.

3.4.1.1 Learners' achievement of minimum proficiency in English Language Activities at different levels by school category

The study also sought to establish the minimum proficiency in English Language Activities at different levels by school categories. The findings are presented in Figure 4.

Figure 4: Percentage of learners achieving Minimum proficiency in English Language Activities at different levels by School Category



	Schools in target counties	Schools in Refugee Camps	Schools in Refugee Host Counties	Schools in Non Refugee /Non host Counties	Schools in Informal Settlements	Special Schools(AB)	National
Level 1	82.8	84.2	79.6	83.3	87.7	70.9	84.7
Level 2	55.4	49.5	49.0	57.1	71.2	51.8	64.0
Level 3	50.0	47.4	39.3	52.2	63.9	54.6	57.5
Level 4	34.3	37.9	21.4	36.4	43.6	36.4	41.4

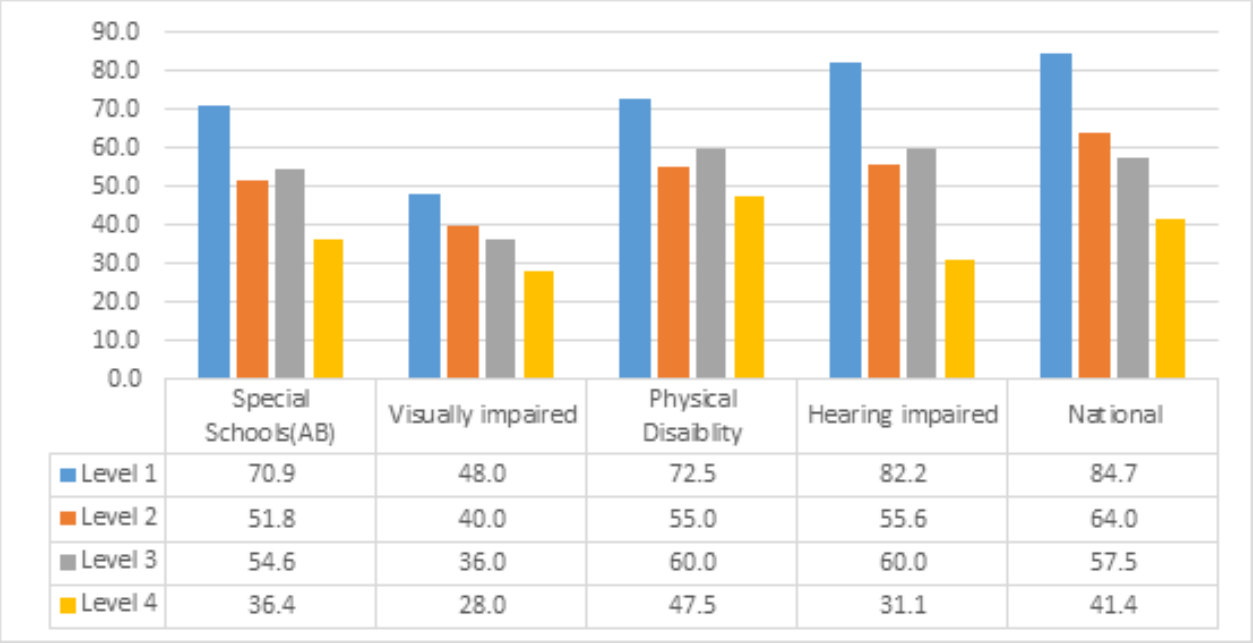
Figure 4 reveals that nationally, 41.4% of learners performed in items that required predictions for possible outcomes for comprehension (Level 4). This implied that more than half (58.6%) did not perform in high order thinking skills. It is also notable that the proportion of learners in schools in informal settlements, special schools (age based) and refugee camp-based schools performing at Level 4 were at 43.6%, 36.4% and 37.90% respectively. Of concern is the low proportion of learners in schools in refugee host counties and schools in target counties performing at Level 4, at 21.4% and 34.3% respectively. The findings reveal the need for interventions for attainment of high order thinking skills at Level 4, among learners across all the categories of schools.

3.4.1.2 Percentage of learners in Special Schools (Age Based) achieving minimum proficiency in English Language Activities at different Levels by School Category

The study sought to find out the percentage of learners in Special Schools (Age Based) achieving

minimum proficiency in English Language Activities at different Levels. The findings are presented in Figure 5.

Figure 5: Percentage of learners in Special Schools (Age Based) achieving minimum proficiency in English Language Activities at different Levels



	Special Schools(AB)	Visually impaired	Physical Disability	Hearing impaired	National
Level 1	70.9	48.0	72.5	82.2	84.7
Level 2	51.8	40.0	55.0	55.6	64.0
Level 3	54.6	36.0	60.0	60.0	57.5
Level 4	36.4	28.0	47.5	31.1	41.4

From Figure 5, it can be observed that the highest proportion of learners achieving the minimum proficiency was recorded in Level 1. The highest proportion was noted in learners with hearing impairment at 82.2%. Low proportion of learners achieving the minimum proficiency were recorded at Level 4 items that required learners to make predictions for possible outcomes for comprehension. Learners with visual impairment recorded the lowest attainment (28.0%) followed by hearing impairment at 31.1%.

3.4.1.3 Learners' achievement of minimum proficiency in English Language Activities at different levels by County

The study sought to establish the minimum proficiency in English Language Activities at different levels by county. The findings are presented in Table 8.

Table 8: Learners' achievement of minimum proficiency in English Language Activities at different levels by County

Counties	Level 1 >=50	Level 2 >=50	Level 3 >=50	Level 4 >=50
Taita Taveta	88.0	54.0	46.0	32.0
Kwale	86.3	53.9	53.0	35.9
Mombasa	97.4	81.6	67.5	52.6
Kilifi	82.6	49.1	43.6	33.0
Tana River	87.0	65.2	54.4	37.0
Lamu	92.0	76.0	66.0	52.0
Nyandarua	83.7	69.4	68.4	49.0
Nyeri	88.1	85.2	75.3	51.5
Kirinyaga	92.0	84.0	84.0	62.0

Counties	Level 1 >=50	Level 2 >=50	Level 3 >=50	Level 4 >=50
Muranga	91.7	79.2	68.1	43.1
Kiambu	87.6	73.6	64.0	45.7
Machakos	80.8	59.2	53.1	34.6
Kitui	82.4	54.6	47.2	35.2
Embu	65.3	50.8	31.5	25.8
Meru	87.9	79.8	66.9	52.4
Marsabit	94.0	58.0	44.0	44.0
Isiolo	79.6	46.9	36.7	18.4
Makueni	91.1	73.4	60.8	44.3
Tharaka Nithi	95.5	90.9	81.8	70.5
Nairobi	90.4	83.2	78.5	61.1
Turkana	72.8	36.4	25.5	18.5
Samburu	92.5	52.7	49.5	25.8
Trans Nzoia	87.5	65.3	61.1	35.4
West Pokot	75.0	35.9	29.7	15.6
Bomet	77.3	44.2	44.2	31.4
Uasin Gishu	89.1	70.8	64.0	47.6
Nakuru	89.1	74.8	65.8	38.6
Kericho	77.8	46.2	42.7	33.3
Nandi	94.5	91.2	84.6	79.1
Laikipia	88.9	66.7	69.4	41.7
Kajiado	95.0	84.3	80.0	67.1
Narok	76.8	47.1	49.7	35.5
Baringo	90.9	52.3	59.1	47.7
Elgeyo Marakwet	90.2	60.8	52.9	31.4
Busia	54.5	35.0	32.5	20.3
Bungoma	81.5	63.0	58.2	46.7
Kakamega	85.8	66.8	62.4	44.9
Vihiga	81.3	72.0	72.0	49.3
Kisumu	85.4	69.1	56.1	36.6
Kisii	87.6	61.3	49.6	29.9
Homa Bay	86.5	65.9	54.0	47.6
Siaya	84.1	62.3	51.7	33.1
Nyamira	82.4	60.8	56.8	35.1
Migori	86.8	55.9	53.3	40.8
Garissa	95.3	71.0	70.1	41.1
Wajir	95.3	67.9	59.4	35.9
Mandera	76.4	65.3	61.1	56.9
National	**85.1**	**64.3**	**57.7**	**41.6**

The findings in Table 8 show that, nationally, level 4 had the lowest proportion of learners attaining the benchmark of 50% in English Language Activities. It also reveals that a substantial proportion of learners did not perform at Level 4, implying they did not meet the benchmark of 50% at this level. For

instance, low proportions of learners were recorded in West Pokot, Isiolo, Turkana and Busia at 15.6%, 18.4%, 18.5%, and 20.3% respectively.

On the other hand, it is observable from the findings that high proportions of learners attaining at Level 4 were registered in Nandi, Tharaka Nithi and Kajiado at 79.1%, 70.5%, and 67.1% respectively.

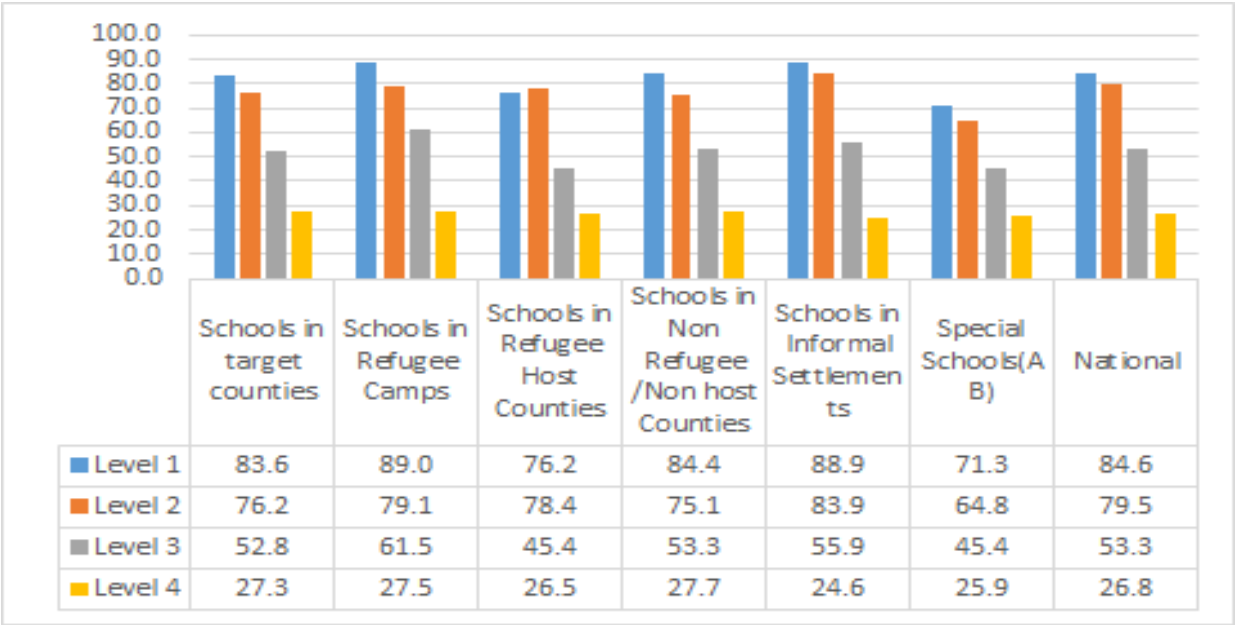
3.4.2 Learners' achievement of minimum proficiency in Mathematical Activities at different levels

The assessment items were categorized into four proficiency levels. In Level 1, the items assessed the learner's abilities to apply single step addition or subtraction operations without regrouping and counting whole numbers. Level 2 items assessed learner ability to apply up to a three-step addition or subtraction operation without or with regrouping, apply simple multiplication operations involving multiples of 10, recognize simple fractions and divide whole numbers, identify lines and patterns. Level 3 items assessed the learner's ability to translate information presented in a sentence into one arithmetic operation, interpret place value of whole numbers up to thousands, add and subtract simple fractions and interpret simple common units of measurement such as days, weeks, litres, metres and shillings. Lastly, Level 4 items assessed the learner's ability to translate information presented in sentences into arithmetic operations (in the correct order) on the whole numbers. The benchmark was set at 50% for all levels.

3.4.2.1 Learners' achievement of minimum proficiency levels in Mathematical Activities at different levels by school category

The study sought to establish the minimum proficiency levels in Mathematical Activities by school categories. The findings are presented in Figure 6.

Figure 6: Percentage of learners' achieving Minimum proficiency Levels in Mathematical Activities by school category



	Schools in target counties	Schools in Refugee Camps	Schools in Refugee Host Counties	Schools in Non Refugee /Non host Counties	Schools in Informal Settlements	Special Schools(AB)	National
Level 1	83.6	89.0	76.2	84.4	88.9	71.3	84.6
Level 2	76.2	79.1	78.4	75.1	83.9	64.8	79.5
Level 3	52.8	61.5	45.4	53.3	55.9	45.4	53.3
Level 4	27.3	27.5	26.5	27.7	24.6	25.9	26.8

Figure 6 reveals that nationally, 26.8 % of learners attained the 50% benchmark at Level 4, in items that required translating information presented in sentences into arithmetic operations (in the correct order) on the whole numbers. This implied that more than half (73.2%) did not perform in high order thinking skills. It is also notable that the proportion of learners in schools in non-refugee/non host counties, schools in refugee camps and schools in target counties were at 27.7 %, 27.5 % and 27.3 % respectively.

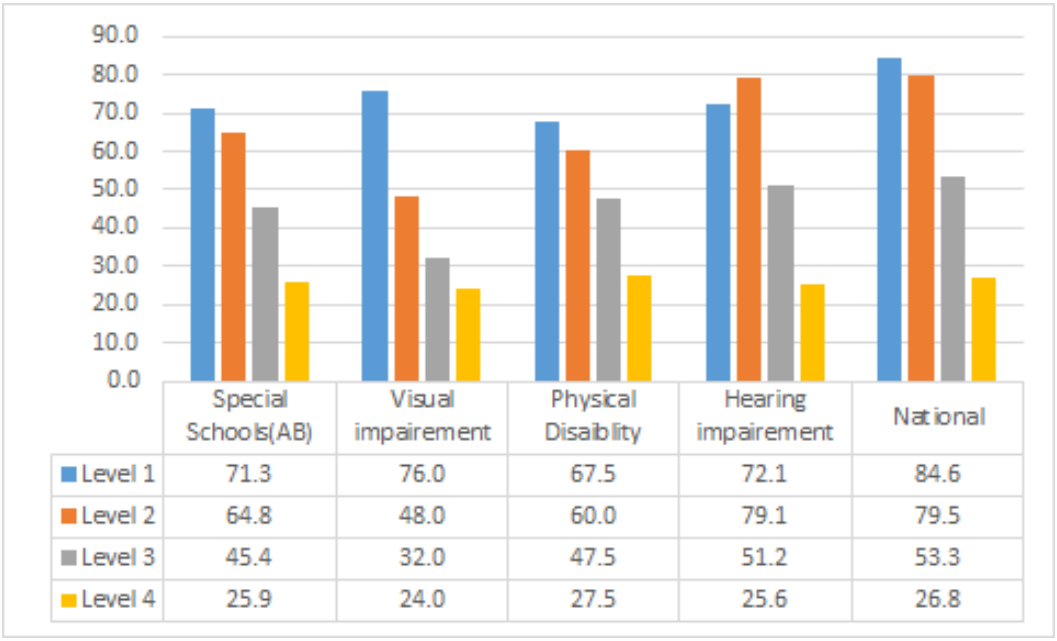
Of concern is the low proportion of learners performing at Level 4 in schools in informal settlements and learners in special schools at 26.4 %

and 25.9% respectively. This implies interventions should be put in place to improve the attainment of 50% benchmark at Level 4.

3.4.2.2 Percentage of Special Schools (Age Based) learners' achieving minimum proficiency in Mathematical Activities at different levels by school category

The study also sought to establish the performance of learners across different disability categories based on four levels of achievement. The categories covered in the study included Visual Impairment, Physical Disability, and Hearing Impairment. The findings are presented in Figure 7.

Figure 7: Percentage of learners in Special Schools (Age Based) achieving minimum proficiency in Mathematical Activities by Levels



	Special Schools(AB)	Visual impairement	Physical Disability	Hearing impairement	National
Level 1	71.3	76.0	67.5	72.1	84.6
Level 2	64.8	48.0	60.0	79.1	79.5
Level 3	45.4	32.0	47.5	51.2	53.3
Level 4	25.9	24.0	27.5	25.6	26.8

From Figure 7, it is worth noting that learners' proportion at Level 4 performance was low across different categories of learners with special needs. It can also be observed that learners with visual impairment recorded the lowest attainment (24.0%) at Level 4, items requiring learners to translate information presented in sentences into arithmetic operations (in the correct order) on whole numbers. It was also revealed that although learners with physical disability achieved the highest (27.5%) at Level 4, the proportion was still low compared to performance at other levels.

3.4.2.3 Learners' achievement of minimum proficiency in Mathematical Activities at different levels by county

The study sought to establish the minimum proficiency in Mathematical Activities at different levels by county. The findings are presented in Table 9.

Table 9: Learners' achievement of minimum proficiency at different levels by county in Mathematical Activities

County	Level 1 >=50%	Level 2 >=50%	Level 3 >=50%	Level 4 >=50%
Taita Taveta	74.0	66.0	38.0	**18.0**
Kwale	81.0	77.6	40.5	**24.1**
Mombasa	92.0	89.4	62.0	**19.5**
Kilifi	81.2	73.7	49.3	**28.2**
Tana River	80.0	66.7	37.8	**42.2**
Lamu	76.0	84.0	42.0	28.0

County	Level 1 >=50%	Level 2 >=50%	Level 3 >=50%	Level 4 >=50%
Nyandarua	89.8	83.7	61.2	45.9
Nyeri	88.0	89.0	65.0	22.0
Kirinyaga	82.0	76.0	52.0	34.0
Muranga	78.6	84.3	57.1	31.4
Kiambu	87.1	86.7	60.0	20.4
Machakos	81.3	82.8	51.6	31.3
Kitui	79.4	76.6	43.0	28.0
Embu	82.2	75.3	38.4	26.0
Meru	89.5	86.3	62.1	30.7
Marsabit	86.0	86.0	50.0	14.0
Isiolo	75.5	61.2	40.8	32.7
Makueni	92.4	91.1	53.2	27.9
Tharaka Nithi	90.5	92.9	69.1	28.6
Nairobi	91.4	92.8	71.4	23.3
Turkana	71.4	71.4	31.0	21.1
Samburu	84.8	78.3	45.7	23.9
Trans Nzoia	85.2	68.3	40.9	17.6
West Pokot	76.2	58.7	31.8	31.8
Bomet	82.3	66.5	43.3	32.3
Uasin Gishu	86.7	81.1	57.3	30.1
Nakuru	83.9	82.9	49.3	29.7
Kericho	69.6	60.0	37.4	25.2
Nandi	94.5	93.4	81.3	47.3
Laikipia	80.6	72.2	52.8	22.2
Kajiado	92.8	89.9	71.7	37.7
Narok	83.7	77.8	55.6	26.1
Baringo	76.7	65.1	37.2	23.3
Elgeyo Marakwet	92.2	84.3	47.1	19.6
Busia	69.7	68.0	29.5	16.4
Bungoma	79.7	72.5	45.1	28.6
Kakamega	82.0	75.8	52.5	25.8
Vihiga	84.0	73.3	48.0	17.3
Kisumu	85.3	86.1	63.1	31.2
Kisii	83.6	74.6	53.7	19.4
Homa Bay	87.2	87.2	56.8	25.6
Siaya	82.7	75.3	58.7	23.3
Nyamira	97.3	82.4	58.1	29.7
Migori	89.3	71.3	48.7	23.3
Garissa	95.2	90.5	82.9	36.2
Wajir	93.3	90.4	69.2	30.8
Mandera	94.4	76.4	66.7	38.9
National	**84.6**	**79.5**	**53.6**	**26.8**

From the findings in Table 9, it can be noted that the highest proportion of learners achieving the

50% benchmark recorded at Level 4 was in Nandi (47.3%) and Nyandarua (45.9%). However, several counties registered a very low proportion of learners attaining a benchmark of 50%, at Level 4. For instance, Marsabit was at 14%, Busia (16.4%) and Vihiga (17.3%).

3.4.3 Learners' achievement of minimum proficiency in Baseline and Midline studies at different levels

The study sought to establish how learners performed in English Language Activities and Mathematical Activities and compare the findings with Baseline study findings. Table 10a and 10b presents the learners' achievement of minimum proficiency for the Baseline and Midline findings.

Table 10a: Learners' achievement of minimum proficiency at different levels for Baseline study findings

Sub-group	English Language Activities (%)				Mathematical Activities (%)			
	Level 1	Level 2	Level 3	Level 4	Level 1	Level 2	Level 3	Level 4
Schools in target counties	14.2	27.6	28.3	29.9	18.2	30.5	32.4	18.9
Schools in Refugee Camps	5.7	29.8	33.6	30.9	10.3	31.2	32.9	25.6
Schools in Refugee Host Counties	4.7	34.4	39.1	21.8	8.7	31.0	39.4	20.9
Schools in Non-Refugee / Host Counties	2.8	31.4	47.6	18.2	4.5	30.5	44.9	20.1
Schools in Informal Settlements	23.5	26.2	34.0	16.3	20.0	28.3	37.0	14.7
Special Schools (Aged based)	16.5	34.3	24.2	25.0	25.8	38.0	24.7	11.5
National	12.8	29.5	33.8	23.9	18.1	30.3	35.8	15.8

Table 10b: Learners' achievement of minimum proficiency at different levels for midline study findings

Sub-group	English Language Activities				Mathematical Activities			
	Level 1	Level 2	Level 3	Level 4	Level 1	Level 2	Level 3	Level 4
Schools in target counties	87.70%	58.60%	53.00%	36.60%	83.50%	76.50%	53.50%	27.60%
Schools in Refugee Camps	89.90%	52.80%	50.60%	40.50%	88.40%	77.90%	61.60%	29.10%
Schools in Refugee Host Counties	88.50%	54.60%	44.30%	24.10%	77.10%	77.70%	46.90%	25.70%
Schools in Non-Refugee / Host Counties	87.40%	59.80%	54.80%	38.40%	84.30%	76.20%	54.00%	27.80%
Schools in Informal Settlements	92.80%	75.30%	67.50%	45.90%	89.00%	86.00%	57.70%	25.00%
Special Schools (Aged based)	77.90%	55.80%	63.20%	42.10%	69.60%	65.70%	45.10%	27.50%
National	89.00%	67.20%	60.50%	43.70%	84.70%	79.70%	53.90%	27.10%

In English Language Activities, it can be noted from Table 10a and 10b that nationally, the midline study showed a significant improvement in learners' performance in English Language Activities compared to the baseline study. Specifically, 43.7% of learners reached Level 4, which involves higher-order

thinking skills, up from 23.9% at baseline-indicating more learners were able to make predictions and understand comprehension outcomes.

It is also revealed that schools in informal settlements registered a higher proportion of learners performing at level 4 at the midline study, at 45.9% compared to 16.3% in the Baseline study. The same trend was noted in special schools (Age Based) where learners performing at level 4 were at 42.1% in Midline study while in the baseline study, they registered 25.0%.

Similarly, in Mathematical Activities, Table 7a and 7b reveal that nationally, the proportion of learners attaining the 50% benchmark at Level 4 in the midline study was higher than in the Baseline study at 27.1% and 15.8% respectively.

It is also observable that schools in Refugee Camps had the highest proportion of learners in the Midline study (29.1%) than in the baseline study (25.6%) attaining the 50% benchmark at level 4 in Mathematical Activities. Similarly, learners performed better at Level 4 in the Midline study in schools in non-Refugee/Host counties at 27.8% compared to the baseline study at 20.1%. Notwithstanding the notable improvements, the proportions of learners achieving the 50% benchmark remain low. This calls for interventions for further attainment of minimum proficiency at Level 4.

3.5 Learners' achievement in mean scores

Analysis of learners' achievement by mean scores is intended to inform individualized intervention measures at the learning area level. The achievement in mean scores by sex, school type and county for English Language Activities and Mathematical Activities are discussed below.

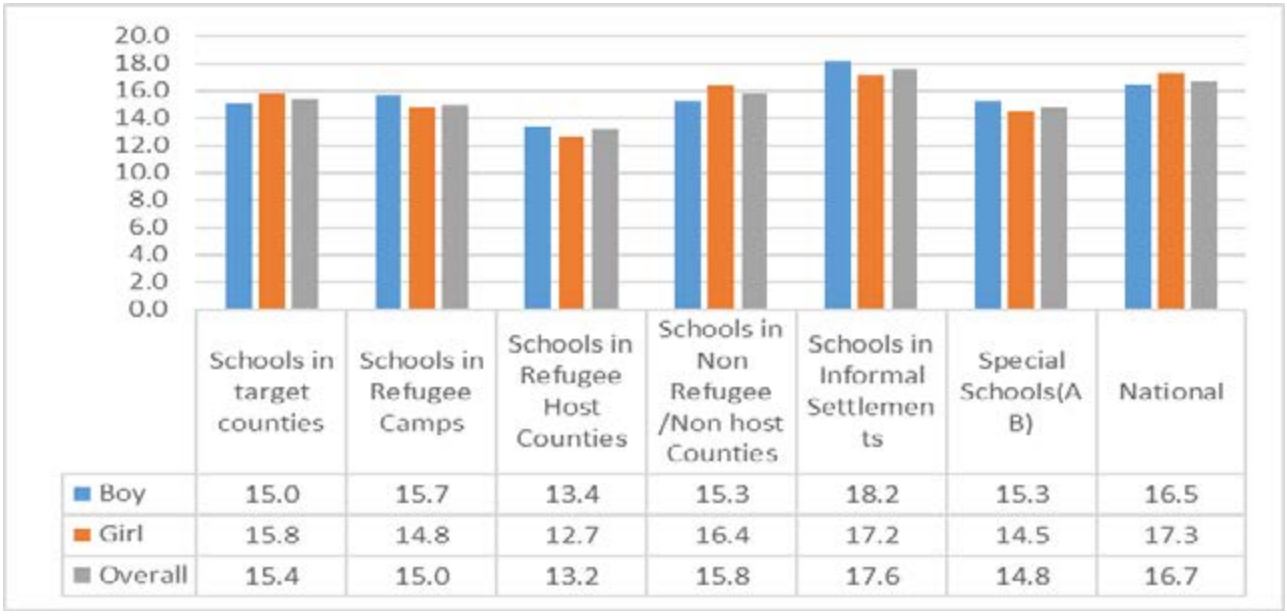
3.5.1 Learners' achievement in mean scores in English Language Activities

The sex of a learner influences the achievement of learning outcomes. The study therefore sought to establish learners' achievement in mean scores by sex in English Language Activities.

3.5.1.1 Learners' achievement in mean scores by sex in English Language Activities

The study sought to establish how boys and girls performed in the English Language Activities. The findings on learners' achievement in mean scores by sex in English Language Activities are presented in Figure 8.

Figure 8: Learners' achievement in mean scores by sex in English Language Activities



	Schools in target counties	Schools in Refugee Camps	Schools in Refugee Host Counties	Schools in Non Refugee /Non host Counties	Schools in Informal Settlements	Special Schools(AB)	National
Boy	15.0	15.7	13.4	15.3	18.2	15.3	16.5
Girl	15.8	14.8	12.7	16.4	17.2	14.5	17.3
Overall	15.4	15.0	13.2	15.8	17.6	14.8	16.7

From Figure 8, the national mean in English Language Activities was 16.7, with girls performing slightly better (17.3) than boys (16.5). It is further

observable that girls outperformed boys in schools in target counties where girls' mean score was 15.8 compared to 15.0 for boys.

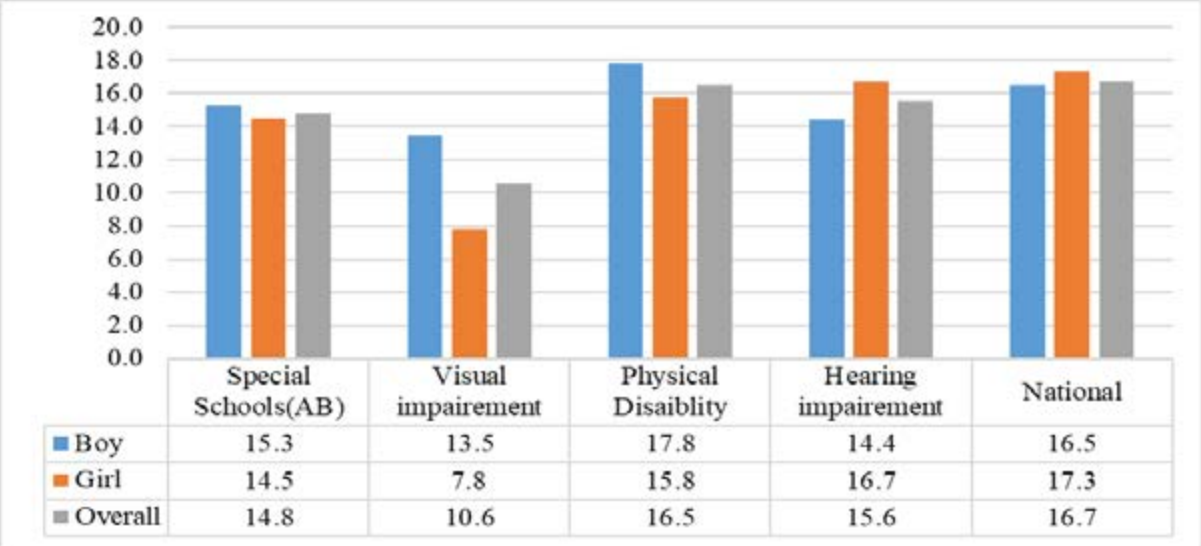
It is also notable that schools in informal settlements had the highest mean scores (18.2 for boys, 17.2 for girls), which is above the national mean. On the other hand, schools in refugee host counties recorded the lowest mean scores with boys registering 13.4 and 12.7 for girls.

However, boys performed better than girls, for instance, in schools in refugee camps, boys' mean scores were 15.7 and 14.8 for girls. In informal settlements, the mean score was 18.2 for boys and 17.2 for girls. In refugee host schools, the mean score was 13.4 and 12.7 for boys and girls respectively. The findings suggest a need for targeted interventions to improve English proficiency across all school categories.

3.5.1.2 Mean Scores in English Language Activities assessments by sex for learners in Special Schools (Age Based)

The study sought to establish the mean scores of English Language Activities assessments by sex for learners in Special Schools (Age Based) and the findings are presented in Figure 9.

Figure 9: Means Scores of English assessments by sex for learners in Special Schools



	Special Schools(AB)	Visual impairement	Physical Disaiblity	Hearing impairement	National
Boy	15.3	13.5	17.8	14.4	16.5
Girl	14.5	7.8	15.8	16.7	17.3
Overall	14.8	10.6	16.5	15.6	16.7

In Figure 9, the mean scores in English Language Activities for learners in Special Schools (Age Based) was 14.8, with boys performing slightly better (15.3) than girls (14.5).

It is also notable that schools with learners with physical disability had the highest mean scores (17.8 for boys and 15.8 for girls), with boys' mean scores above the national mean. On the other hand, schools with learners with visual impairment recorded the lowest mean scores with boys and girls registering 13.5 and 7.8 respectively.

3.5.2 Learners' achievement in mean scores in Mathematical Activities

The study also sought to establish learners' achievement in mean scores by sex in Mathematical Activities.

3.5.2.1 Learners' achievement in mean scores by sex in Mathematical Activities

The study sought to establish the performance of learners based on sex. The findings are presented in Figure 10.

Figure 10: Learners' achievement in mean scores by sex in Mathematical Activities

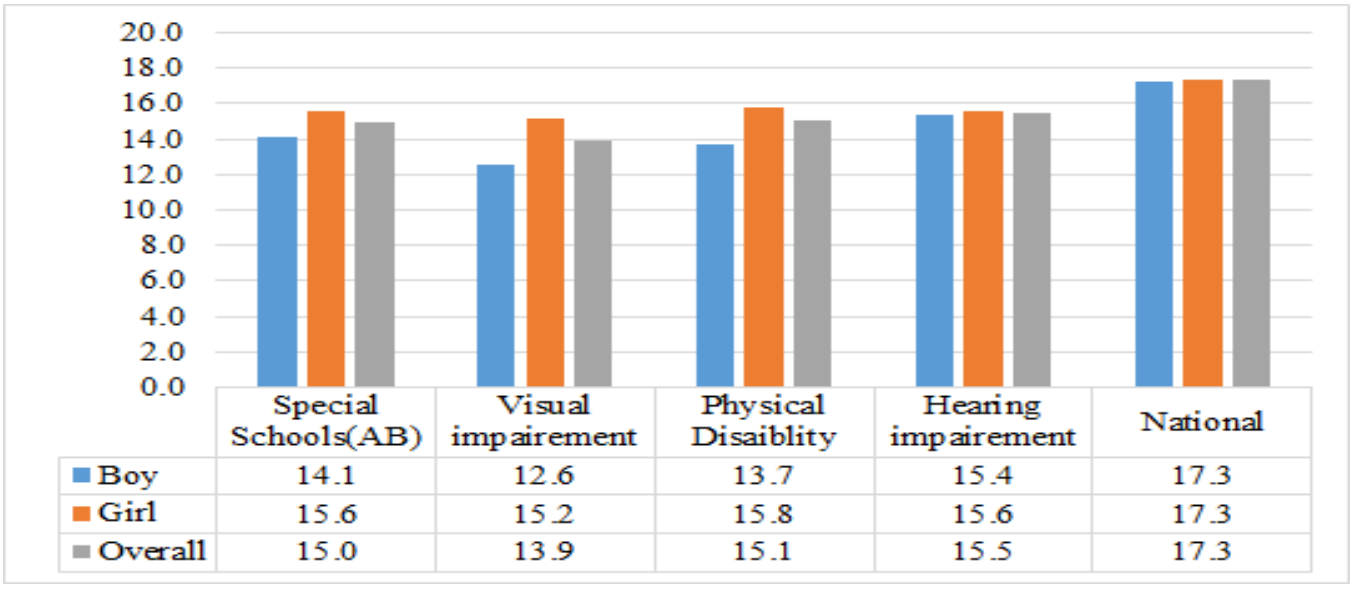
The findings in Figure 10 reveal that the national mean score in Mathematical Activities was 17.3, with girls and boys performing at par. The findings further establish that girls outperform boys in schools in refugee camps where girls' mean score was at 18.2 against 17.0 for boys.

It can also be observed that schools in refugee camps and schools in informal settlements had the highest mean score (both had a mean of 17.6). It was also noted that nationally, special schools (Age Based) recorded the lowest means (15.0) with girls registering 15.6 and boys at 14.1.

3.5.2.2 Learners' achievement by mean scores in Special Schools (Age Based) by sex in Mathematical Activities

The study sought to establish the performance of learners based on sex in Special Schools (Age Based). The categories covered in the study included visual impairment, physical disability, and hearing impairment. The findings are presented in Figure 11.

Figure 11: Learners' achievement in mean scores in Special Schools (Age Based) by sex in Mathematical Activities



	Special Schools(AB)	Visual impairement	Physical Disaiblity	Hearing impairement	National
Boy	14.1	12.6	13.7	15.4	17.3
Girl	15.6	15.2	15.8	15.6	17.3
Overall	15.0	13.9	15.1	15.5	17.3

Figure 11 shows that, at the national level, girls in special schools (age-based) performed better than boys, with mean scores of 15.6 compared to 14.1 for boys. It can also be observed in overall performance; learners with visual impairment recorded the lowest mean score (13.9) while learners with hearing impairment had the highest mean score (15.5).

3.5.3 Learners' Achievement in Mean scores by Age

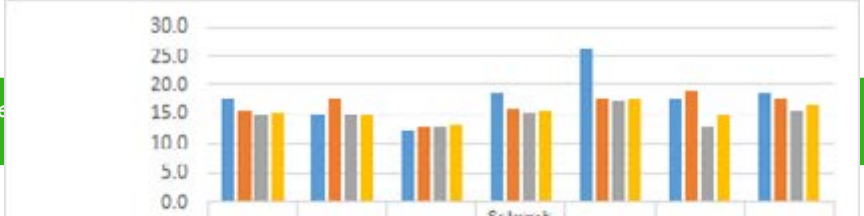
The study sought to find out the influence of age on the achievement of learning outcomes in English Language Activities and Mathematical Activities.

3.5.3.1 English Language Activities

The findings on learners' achievement in mean scores by age in English Language Activities are presented in Figure 12.

Figure 12: Learners' Achievement in Mean scores by Age in English Language Activities

Nationally, the findings in Figure 12 reveal that the highest performance mean score was registered among learners' aged below 9 years with a mean of 18.8 followed by the learners between 9 to 10 years with a mean of 17.8. Conversely, learners' above 10 years recorded the lowest mean score



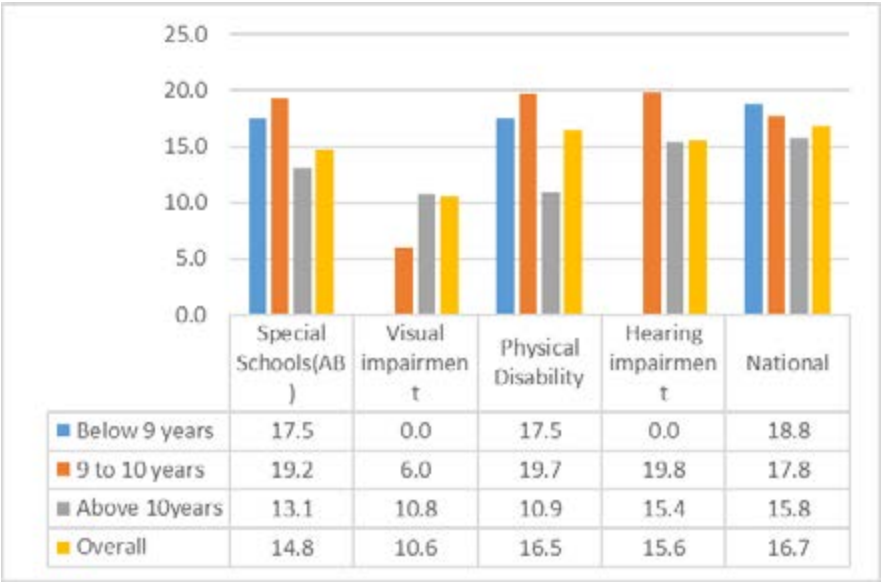
at 15.8. Across the school categories the learners' below 9 years and between 9 to 10 years recorded comparatively higher mean scores. For instance, in schools in refugee camps and special schools (Aged Based), the learners aged 9 to 10 years registered the highest mean at 17.7 and 19.2 respectively. This is comparable to the national mean of 17.8.

In most categories of schools, the findings revealed that learners above 10 years registered the lowest means. For instance, in schools in target counties and schools in refugee camps, the mean of the learners above 10 years was 14.9 and 15.0 respectively. Learners between 9-10 years were the highest-performing group in most categories, indicating the age range (9-10) may be responsive to learning interventions.

3.5.3.2 English means by age group for learners in special schools (Age based)

The study sought to establish the performance of learners' based on age in Special Schools (Age Based). The categories covered in the study included visual impairment, physical disability, and hearing impairment, and the findings are presented in Figure 13.

Figure 13: Achievement in Mean scores by Age for Learners' in special school (Age based) in English Language Activities



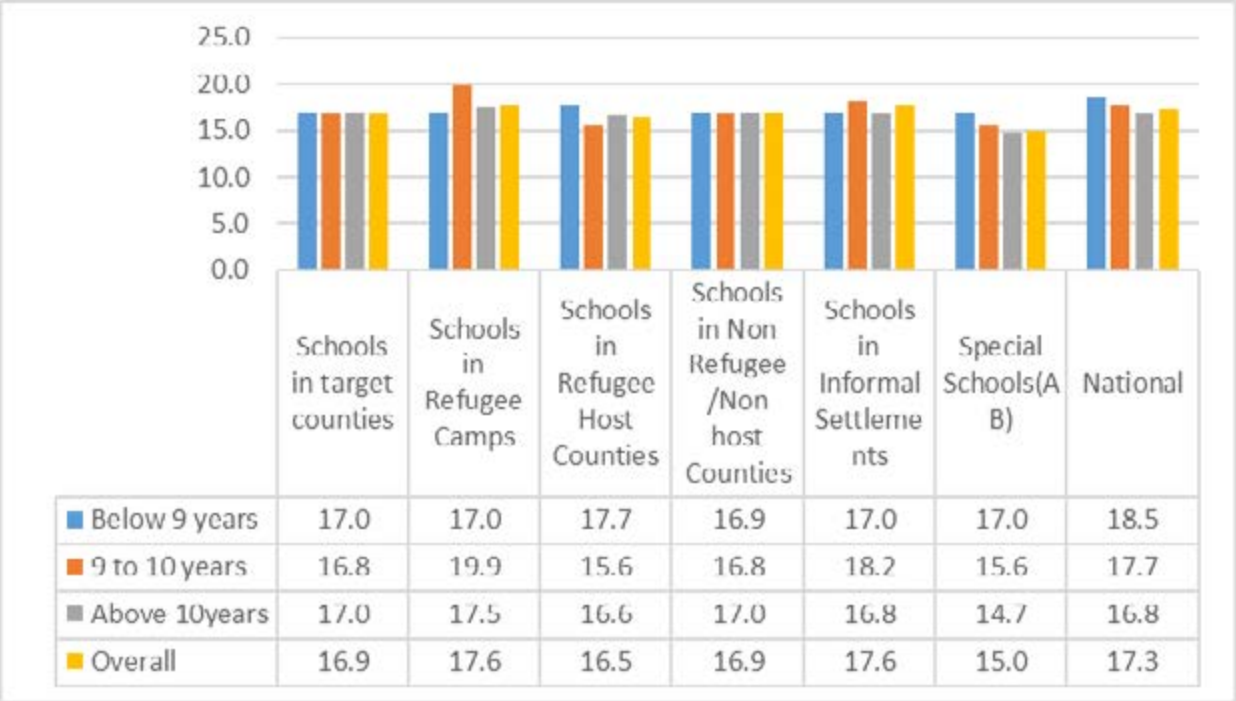
	Special Schools(AB)	Visual impairment	Physical Disability	Hearing impairment	National
Below 9 years	17.5	0.0	17.5	0.0	18.8
9 to 10 years	19.2	6.0	19.7	19.8	17.8
Above 10years	13.1	10.8	10.9	15.4	15.8
Overall	14.8	10.6	16.5	15.6	16.7

It is notable from Figure 13 that in Special schools (Age Based) the performance is highest for learners aged 9-10 years with a mean at 19.2 but declines with age, suggesting challenges in sustaining performance over time. The opposite is seen in the national average where performance is highest in below 9 years with a mean of 18.8 but declines with age, 9-10 years having a mean of 17.8 and above 10 years with a mean of 15.8. The findings further revealed that learners between 9 to 10 years of age with physical disability and those with hearing impairment performed better achieving means of 19.7 and 19.8 respectively, however, this performance declined with age. These findings suggest that age influences learners' achievement of learning outcomes in English Language Activities. This supports the enforcement of age-appropriate guidelines on school admission and progression.

3.5.3.4 Mathematical Activities

The study sought to establish the performance of learners based on age. The findings were presented in Figure 14

Figure 14: Learners Achievement in Mean scores by Age in Mathematical Activities



	Schools in target counties	Schools in Refugee Camps	Schools in Refugee Host Counties	Schools in Non Refugee /Non host Counties	Schools in Informal Settlements	Special Schools(AB)	National
Below 9 years	17.0	17.0	17.7	16.9	17.0	17.0	18.5
9 to 10 years	16.8	19.9	15.6	16.8	18.2	15.6	17.7
Above 10years	17.0	17.5	16.6	17.0	16.8	14.7	16.8
Overall	16.9	17.6	16.5	16.9	17.6	15.0	17.3

Nationally, the findings in Figure 14 reveal that the highest performance mean was registered among learners aged below 9 years with a mean of 18.5 followed by the learners aged 9 to 10 years with mean of 17.7. Conversely, learners above 10 years recorded the lowest mean at 16.8.

3.5.3.5 Learners' achievement in mean scores by age in Mathematical Activities for learners in Special Schools (Age Based)

The study sought to establish the performance of learners based on age across different disability categories. The categories covered in the study included visual impairment, physical disability, and hearing impairment, and the findings are presented in Figure 15.

Figure 15: Learners' achievement in mean scores by age in Mathematical Activities for learners in Special Schools (Age Based)

	Special Schools(AB)	Visual impairment	Physical Disability	Hearing impairment	National
Below 9 years	17.0	18.5	0.0	0.0	18.5
9 to 10 years	15.6	14.0	15.5	16.3	17.7
Above 10years	14.7	13.9	14.1	15.4	16.8
Overall	15.0	13.9	15.1	15.5	17.3

The findings in Figure 15 show that the learners with visual impairment below 9 years had the highest mean score of 18.5 while those above 10 years in the same category had the lowest mean of 13.9. The findings also reveal that learners with hearing impairment aged 9 to 10 had a higher mean score compared to the learners above 10 years in the same category. A similar observation can be noted for learners with physical disability. It can be deduced from the findings that age influences learners' achievement of learning outcomes in Mathematical Activities. Therefore, these findings support the enforcement of age-appropriate guidelines on school admission and progression.

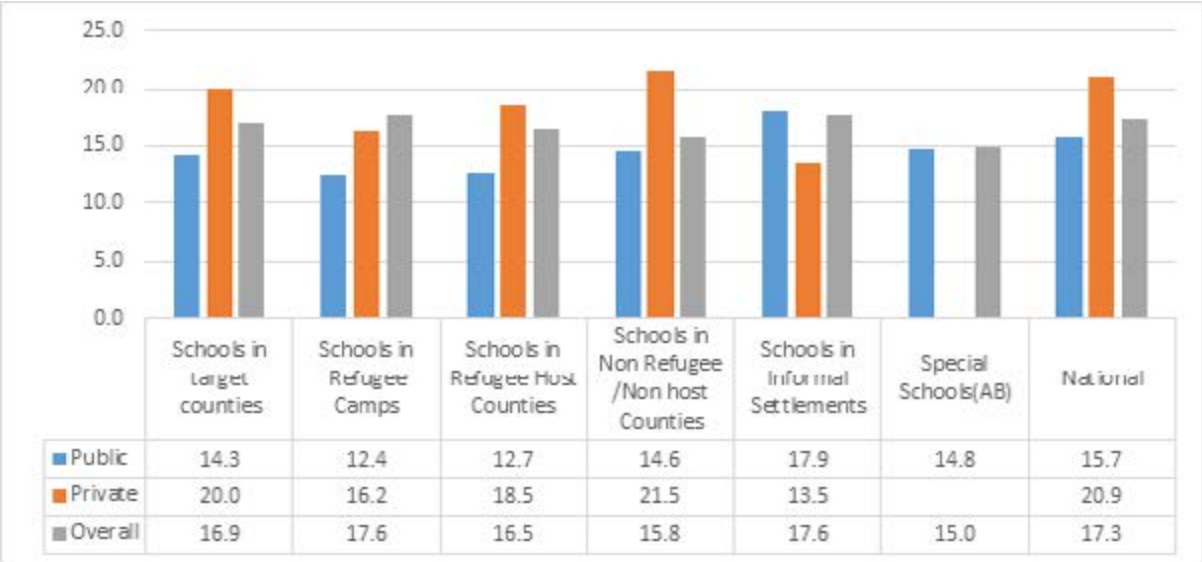
3.5.4 Learners' achievement in mean scores by school type

In Kenya, Basic education is provided in both government and privately-owned institutions. The study sought to find out the influence of school type on achievement of learning outcomes in English Language Activities and Mathematical Activities.

3.5.4.1 English Language Activities

The study sought to find out the performance of learners based on school type. The findings are presented in Figure 16.

Figure 16: Learners' achievement by mean scores in public and private schools in English Language Activities



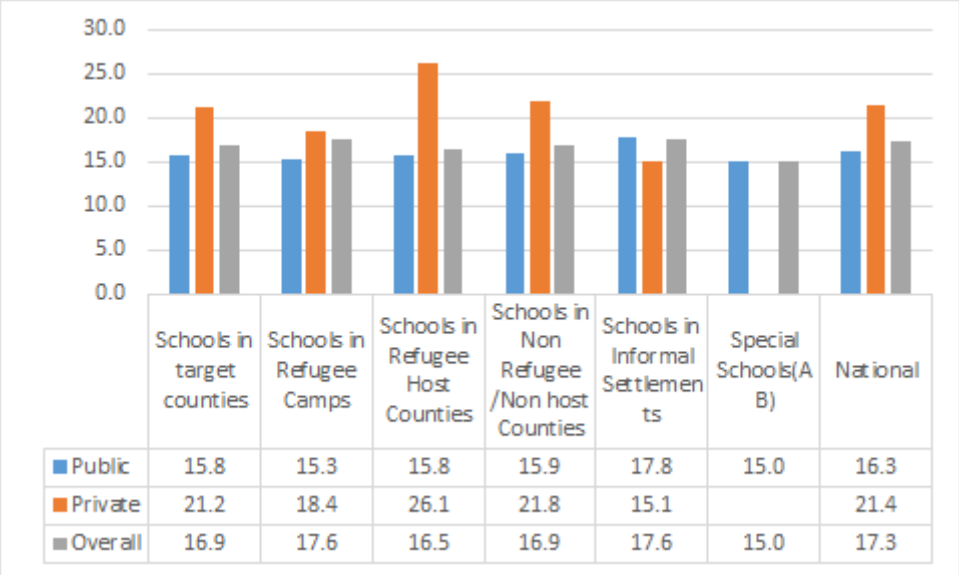
	Schools in target counties	Schools in Refugee Camps	Schools in Refugee Host Counties	Schools in Non Refugee /Non host Counties	Schools in Informal Settlements	Special Schools(AB)	National
Public	14.3	12.4	12.7	14.6	17.9	14.8	15.7
Private	20.0	16.2	18.5	21.5	13.5		20.9
Overall	16.9	17.6	16.5	15.8	17.6	15.0	17.3

From Figure 16, it is observable that nationally, private schools had higher mean scores than public schools at 20.9 and 15.7 respectively in English Language Activities. It was also noted that private schools had higher mean scores in schools in non-refugee/non host counties, target counties, schools in refugee host counties and schools in refugee camps with a mean of 21.5, 20.0, 18.5 and 16.2 respectively. However, public schools in informal settlements performed better with a mean of 17.9 against private schools with a mean of 13.5. It can be deduced that school type may influence learners' achievement levels in English Activities.

3.5.4.2 Mathematical Activities

The study sought to find the performance of learners' in Mathematical Activities based on school type. The findings are presented in Figure 17.

Figure 17: Learners' achievement by mean scores in public and private schools in Mathematical Activities



From Figure 17, it is observable that nationally, private schools had a higher mean score than public schools at 21.4 and 16.3 respectively in Mathematical activities. It was also noted that private schools had higher mean scores in schools in refugee host counties, schools in Non refugee/Non host counties and schools in target counties with mean scores of 26.1, 21.8 and 21.2 respectively. However, public schools in informal settlements performed better with a mean of 17.8 against private schools with a mean of 15.1. These findings suggest that school type may influence learners' performance in Mathematical Activities.

3.5.5 Learners' achievement in mean scores per County

This study sought to find out the achievement of learning outcomes in Mathematical Activities and English Language Activities in all counties. The findings are presented in Table 11.

Table 11: Learners' achievement in mean scores per county in English Language Activities and Mathematical Activitie

	English Language Activities		Mathematical Activities	
County	Overall mean	SE	Overall mean	SE
Taita Taveta	15.2	0.84	14.9	0.74
Kwale	15.3	0.51	16.0	0.44
Mombasa	19.9	0.62	18.9	0.52
Kilifi	14.5	0.42	16.8	0.40
Tana River	16.2	0.76	15.6	0.71
Lamu	18.2	0.88	17.0	0.82
Nyandarua	18.2	0.72	18.4	0.53
Nyeri	20.4	0.63	18.9	0.52
Kirinyaga	21.1	0.90	17.3	0.88
Muranga	18.6	0.84	17.5	0.66
Kiambu	18.4	0.45	17.9	0.33
Machakos	15.3	0.71	17.4	0.49
Kitui	15.1	0.57	16.3	0.51
Embu	11.5	0.69	15.8	0.56
Meru	19.4	0.61	19.3	0.51
Marsabit	16.0	0.67	16.9	0.73

	English Language Activities		Mathematical Activities	
County	Overall mean	SE	Overall mean	SE
Isiolo	13.6	0.74	15.2	0.86
Makueni	17.9	0.72	17.9	0.60
Tharaka Nithi	21.0	0.98	19.2	0.83
Nairobi	20.9	0.36	19.8	0.28
Turkana	11.3	0.46	14.2	0.35
Samburu	15.5	0.63	15.6	0.51
Trans Nzoia	16.7	0.49	14.9	0.38
West Pokot	11.6	0.52	14.8	0.74
Bomet	14.0	0.46	16.0	0.46
Uasin Gishu	17.5	0.49	17.6	0.42
Nakuru	18.1	0.44	17.0	0.40
Kericho	15.1	0.70	15.1	0.58
Nandi	22.9	0.59	21.8	0.58
Laikipia	17.9	0.92	16.0	0.85
Kajiado	22.1	0.58	20.7	0.48
Narok	14.6	0.63	16.7	0.41
Baringo	16.7	0.89	15.0	0.80
Elgeyo Marakwet	15.5	0.88	16.4	0.51
Busia	9.9	0.68	14.3	0.46
Bungoma	17.1	0.56	16.3	0.45
Kakamega	17.0	0.43	16.8	0.36
Vihiga	18.4	0.76	16.8	0.67
Kisumu	16.8	0.60	18.4	0.47
Kisii	15.4	0.47	16.3	0.48
Homa Bay	16.9	0.61	17.7	0.50
Siaya	16.1	0.49	17.0	0.42
Nyamira	15.9	0.73	18.0	0.68
Migori	15.9	0.44	15.9	0.38
Garissa	18.1	0.58	21.2	0.50
Wajir	17.2	0.64	19.6	0.51
Mandera	18.1	1.20	19.5	0.77
National	**16.7**	**0.10**	**17.3**	**0.08**

From Table 11, it is observable that, in English Language Activities, Nandi County had the highest mean score of 22.9 followed by Kajiado at 22.1 and Kirinyaga at 21.1. On the other hand, it was observed that Busia County had the lowest mean of 9.9 among the lowest-performing counties in English Language Activities followed by Turkana, Embu and West Pokot counties at 11.3, 11.5 and 11.6 respectively.

In Mathematical Activities, Nandi County had the highest mean score of 21.8 followed by Kajiado at 20.7 and Garissa at 21.2. Conversely, Turkana County had the lowest mean score of 14.2 among the lowest-performing counties in Mathematical Activities followed by Busia, West Pokot and Trans Nzoia at 14.3, 14.8 and 14.9 respectively.

These findings highlight disparities in achievement levels in Mathematical Activities and English Language Activities across the country, calling for strategic interventions that focus on improving literacy and numeracy in low performing counties.

3.5.6 Learners' achievement in mean scores per county by sex

The study sought to analyse learners' achievement in English Language Activities and Mathematical Activities per county and by sex.

3.5.6.1 English Language Activities

The study sought to find out learners' achievement in mean scores per county by sex in English Language Activities. The findings are presented in Table 12.

Table 12: Learners' achievement in mean scores per county by sex in English Language Activities

County	Overall Mean		Boys		Girls	
	Overall mean	SE	Mean	SE	Mean	SE
Taita Taveta	15.2	0.84	15.2	1.06	15.2	1.31
Kwale	15.3	0.51	15.3	0.69	15.2	0.76
Mombasa	19.9	0.62	20.1	0.87	19.8	0.88
Kilifi	14.5	0.42	14.3	0.58	14.8	0.63
Tana River	16.2	0.76	15.0	1.08	17.0	1.08
Lamu	18.2	0.88	17.4	1.26	19.0	1.24
Nyandarua	18.2	0.72	17.3	1.03	19.1	0.99
Nyeri	20.4	0.63	21.1	0.96	19.7	0.85
Kirinyaga	21.1	0.90	20.2	1.85	21.5	1.01
Muranga	18.6	0.84	17.1	1.09	20.6	1.29
Kiambu	18.4	0.45	18.7	0.64	18.1	0.64
Machakos	15.3	0.71	15.8	1.03	15.0	1.01
Kitui	15.1	0.57	14.2	0.72	16.3	0.89
Embu	11.5	0.69	9.6	1.13	11.3	1.20
Meru	19.4	0.61	18.7	0.97	20.0	0.76
Marsabit	16.0	0.67	14.9	0.76	18.0	1.16
Isiolo	13.6	0.74	14.8	0.98	12.4	1.08
Makueni	17.9	0.72	17.4	0.98	18.5	1.06
Tharaka Nithi	21.0	0.98	21.9	1.01	19.3	1.96
Nairobi	20.9	0.36	20.6	0.52	21.3	0.52
Turkana	11.3	0.46	11.4	0.66	10.9	0.71
Samburu	15.5	0.63	14.4	0.64	17.2	1.21
Trans Nzoia	16.7	0.49	15.2	0.72	18.0	0.64
West Pokot	11.6	0.52	11.3	0.71	12.0	0.79
Bomet	14.0	0.46	13.3	0.58	14.5	0.75
Uasin Gishu	17.5	0.49	17.3	0.66	18.2	0.78
Nakuru	18.1	0.44	18.0	0.59	18.3	0.63
Kericho	15.1	0.70	15.8	0.99	14.5	1.01
Nandi	22.9	0.59	22.4	0.91	23.3	0.77
Laikipia	17.9	0.92	17.5	1.27	18.4	1.36
Kajiado	22.1	0.58	21.6	0.76	22.5	0.91
Narok	14.6	0.63	15.1	0.83	14.2	1.01
Baringo	16.7	0.89	17.6	0.87	15.3	1.58
Elgeyo Marakwet	15.5	0.88	15.1	1.25	16.1	1.23
Busia	9.9	0.68	8.9	0.92	11.6	0.97
Bungoma	17.1	0.56	16.1	0.74	18.2	0.86

County	Overall Mean		Boys		Girls	
	Overall mean	SE	Mean	SE	Mean	SE
Kakamega	17.0	0.43	16.3	0.67	17.9	0.55
Vihiga	18.4	0.76	18.6	1.20	18.3	0.99
Kisumu	16.8	0.60	16.4	0.86	17.3	0.85
Kisii	15.4	0.47	14.8	0.67	16.0	0.68
Homa Bay	16.9	0.61	16.7	0.92	17.0	0.83
Siaya	16.1	0.49	15.9	0.77	16.1	0.62
Nyamira	15.9	0.73	17.2	0.97	14.4	1.07
Migori	15.9	0.44	16.1	0.62	15.8	0.62
Garissa	18.1	0.58	18.9	0.79	17.1	0.83
Wajir	17.2	0.64	16.5	0.81	18.4	1.06
Mandera	18.1	1.20	17.8	1.68	18.4	1.73
National	**16.7**	**0.10**	**16.5**	**0.13**	**17.33**	**0.14**

The findings in Table 12 reveal that in most counties (31 out of 47), girls performed slightly better than boys, as seen in counties like Nyandarua (Girls: 19.1, Boys: 17.3); Siaya (Girls: 16.1 , Boys: 15.9); Kakamega (Girls 17.9, Boys 16.3) and Elgeyo Marakwet (Girls 16.1, Boys 15.1). In some counties (15 out of 47), however, boys outperformed girls, such as Mombasa (Boys: 20.1, Girls: 19.8), Machakos (Boys: 15.8, Girls: 15.0) and Vihiga (Boys: 18.6, Girls: 18.3). Notably, in Taita Taveta county, girls and boys recorded the same mean of 15.2.

The findings suggest notable gender disparities in performance. Counties with lower mean scores may require educational interventions to bridge the gender gap.

3.5.6.2 Mathematical Activities

The study sought to find out learners' achievement in mean scores per county by sex in Mathematical Activities. The findings are presented in Table 13.

Table 13: Learners' achievement in mean scores per county by sex in Mathematical Activities

	Overall		Boys		Girls	
County	Mean	SE	Mean	SE	Mean	SE
Taita Taveta	14.9	0.74	13.5	0.90	16.3	1.12
Kwale	16.0	0.44	16.4	0.59	15.6	0.64
Mombasa	18.9	0.52	18.6	0.81	19.1	0.69
Kilifi	16.8	0.40	16.3	0.53	17.3	0.58
Tana River	15.6	0.71	16.7	1.11	14.8	0.89
Lamu	17.0	0.82	17.3	0.92	16.6	1.42
Nyandarua	18.4	0.53	17.8	0.84	19.0	0.67
Nyeri	18.9	0.52	19.0	0.79	18.8	0.69
Kirinyaga	17.3	0.88	17.1	1.67	17.5	1.04
Muranga	17.5	0.66	18.3	0.80	16.4	1.09
Kiambu	17.9	0.33	17.3	0.49	18.4	0.44
Machakos	17.4	0.49	18.6	0.72	16.4	0.64
Kitui	16.3	0.51	16.3	0.73	16.3	0.70
Embu	15.8	0.56	15.7	0.82	15.9	0.78
Meru	19.3	0.51	19.7	0.75	19.0	0.70
Marsabit	16.9	0.73	16.7	0.81	17.4	1.45

	Overall		Boys		Girls	
County	Mean	SE	Mean	SE	Mean	SE
Isiolo	15.2	0.86	15.0	1.03	15.5	1.40
Makueni	17.9	0.60	17.5	0.80	18.4	0.90
Tharaka Nithi	19.2	0.83	19.0	1.17	19.5	1.17
Nairobi	19.8	0.28	19.7	0.42	19.9	0.37
Turkana	14.2	0.35	13.9	0.49	14.6	0.50
Samburu	15.6	0.51	15.5	0.63	15.8	0.89
Trans Nzoia	14.9	0.38	13.9	0.58	15.8	0.50
West Pokot	14.8	0.74	14.4	0.94	15.3	1.21
Bomet	16.0	0.46	15.8	0.59	16.3	0.74
Uasin Gishu	17.6	0.42	17.8	0.59	17.2	0.58
Nakuru	17.0	0.40	16.8	0.61	17.2	0.52
Kericho	15.1	0.58	15.0	0.84	15.1	0.82
Nandi	21.8	0.58	22.2	0.88	21.6	0.78
Laikipia	16.0	0.85	16.8	1.31	15.1	1.06
Kajiado	20.7	0.48	20.9	0.67	20.5	0.69
Narok	16.7	0.41	16.6	0.52	16.9	0.65
Baringo	15.0	0.80	15.6	0.93	14.5	1.34
Elgeyo Marakwet	16.4	0.51	16.9	0.68	15.9	0.76
Busia	14.3	0.46	14.6	0.59	13.9	0.73
Bungoma	16.3	0.45	16.1	0.61	16.5	0.67
Kakamega	16.8	0.36	17.0	0.54	16.7	0.48
Vihiga	16.8	0.67	17.8	1.00	16.0	0.89
Kisumu	18.4	0.47	18.5	0.70	18.3	0.62
Kisii	16.3	0.48	16.4	0.69	16.3	0.67
Homa Bay	17.7	0.50	17.7	0.70	17.7	0.70
Siaya	17.0	0.42	17.8	0.62	16.3	0.56
Nyamira	18.0	0.68	18.7	0.90	17.2	1.04
Migori	15.9	0.38	16.5	0.57	15.3	0.50
Garissa	21.2	0.50	22.0	0.68	20.5	0.72
Wajir	19.6	0.51	19.5	0.64	19.7	0.85
Mandera	19.5	0.77	18.6	1.08	20.5	1.10
National	**17.3**	**0.08**	**17.3**	**0.1085**	**17.3**	**0.108**

The findings in Table 13 indicate that in the majority of counties (23 out of 47), boys slightly outperformed girls, as observed in counties like Garissa (Boys: 22.0, Girls: 20.5), Machakos (Boys: 18.6, Girls: 16.4), Murang'a (Boys: 18.3, Girls: 16.4), and Baringo (Boys: 15.6, Girls: 14.5). However, in 22 out of 47 counties, girls performed better than boys: Taita Taveta (Boys: 13.5, Girls: 16.3), Marsabit (Boys: 16.7, Girls: 17.4), and Mandera (Boys: 18.6, Girls: 20.5).

The findings suggest notable gender disparities in performance in most counties except in Kitui and Homa Bay, where boys' and girls' performance were at par.

3.6 Learners' Achievement by Content area by category

3.6.1 English Language activities

The content areas that the study focused on in English Language Activities included direct questions, inference questions, prediction, vocabulary, and language structure.

3.6.1.1 Percentage of learners' achieving minimum proficiency in English Language Activities by content area

The study sought to establish the percentage of learners' achieving minimum proficiency levels in different content areas in English Language Activities, across various school categories in Kenya. The content areas cover direct questions, inference questions, prediction, vocabulary, and language structure. The findings are presented in Figure 18.

Figure 18: Percentage of learners' achieving minimum proficiency in English language Activities by content area

	Schools in target counties	Schools in Refugee Camps	Schools in Refugee Host Counties	Schools in Non Refugee /Non host Counties	Schools in Informal Settlements	Special Schools(AB)	National
Direct quesitons	65.7	59.0	62.8	77.5	76.5	67.9	70.6
Inference questions	77.0	76.8	66.8	77.5	84.8	81.1	81.0
Predirtion	67.3	62.1	59.2	68.8	76.5	69.8	72.8
Vocabulary	61.7	59.0	57.1	62.5	71.9	72.6	67.0
Language Structure	67.5	63.2	63.4	68.6	77.5	69.8	72.1

Figure 18 reveals that nationally, inference questions had the highest proportion of learners achieving the 50% benchmark at 81.0% compared to prediction questions (72.8%), language structure (72.1%), direct questions (70.6%) and vocabulary (67.0%). The lowest proportion of learners performing in vocabulary was registered in schools in refugee host counties at 57.1%.

3.6.1.2 Learners' in Special Schools (Age Based) achieving minimum proficiency in English language Activities by content area.

The study sought to establish the percentage of learners achieving minimum proficiency in different English Language Activities content areas for learners in special schools (Age-based). The findings are presented in Figure 19.

Figure 19: Percentage of Learners in Special Schools (Age Based) achieving minimum proficiency in English language Activities by content area

The findings in Figure 19 reveal that, in special schools (Age Based), inference questions registered the highest proportion of learners (81.1%), followed by vocabulary at 72.6%. The lowest proportion of learners was recorded in prediction at 61.0 among the hearing impairment learners.

Learners' performance in face-to-face listening and speaking task

Table 14 presents the distribution of learners' performance in face-to-face listening and speaking task.

Table 14: Performance in face-to-face listening and speaking task.

Level	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Below Expectation (Level 1)	17.7	26.7	15.1	17.3	12.2	40.7	16.7
Approaching Expectation (Level 2)	34.4	57.8	31.3	32.8	23.7	15.4	30.2
Meeting Expectation (Level 3)	32.4	13.3	38.6	33.1	39.1	17.6	34.0
Exceeding Expectation (Level 4)	15.6	2.2	15.1	16.8	25.0	26.4	19.1

Table 14 reveals that nationally, 34.0% of learners performed at meeting expectation level while 19.1% performed at exceeding level in the face to face listening and speaking task. Notably 16.7% performed at below expectation level.

The findings further reveal that learners in refugee camp schools show comparatively weaker performance, with 26.7% of learners performing at below expectation level, which the second highest across all categories, and only 13.3% and 2.2% performing at meeting expectation and exceeding expectation level respectively.

It is also notable that Special schools (AB) record the highest proportion of learners below expectation (40.7%), indicating substantial challenges in listening comprehension whose administration was in signed exact English, to test their eye-listening skills.

Learners' performance in reading fluency (words per minute) task

Table 15 presents the distribution of learners' performance in the reading fluency (words per minute) task.

Table 15: Performance in reading fluency (words per minute) task

Level	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Below Expectation (Level 1) 0-44 words	20.5	22.7	12.3	21.7	13.8	45.6	19.0
Approaching Expectation (Level 2) 45-89 words	36.9	53.4	43.6	34.3	28.2	23.3	33.5
Meeting Expectation (Level 3) 90 words	26.9	20.5	34.4	26.3	31.1	12.2	27.9

Level	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Exceeding Expectation (Level 4) 91 and above words	15.7	3.4	9.8	17.7	26.9	18.9	19.6

From Table 15 it is observable that nationally, 27.9% of learners performed at meeting expectation level in reading fluency, while 19.0% remained below expectation, indicating that a considerable proportion of learners have not yet attained the required reading proficiency.

It was also revealed that leaners in schools in refugee host counties recorded the highest proportion of learners meeting expectation (34.4%), suggesting relatively stronger attainment of the minimum reading fluency benchmark compared to other school categories.

It is notable that learners in refugee camp schools registered the lowest proportion of learners meeting expectation (20.5%) compared to their counterparts in schools in target counties (26.9%), schools in refugee host counties (34.4%), schools in non-refugee/non-host counties (26.3%) and schools in informal settlements (31.1%).

The findings further revealed that learners in special schools (AB) recorded the highest proportion of learners below expectation (45.6%), which is more than double the national average, implying that a substantial proportion of learners with special needs have not yet attained the required reading proficiency.

Learners' performance in listening comprehension task

The distribution of learners' performance in the listening comprehension task is presented in Table 16.

Table 16: Performance in listening comprehension tas

Levels	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Below Expectation (Level 1)	19.7	24.7	12.7	20.4	15.7	45.1	18.5
Approaching Expectation (Level 2)	32.3	41.6	33.1	31.3	22.3	17.6	29.3
Meeting Expectation (Level 3)	33.7	31.5	39.8	32.9	36.9	17.6	33.5
Exceeding Expectation (Level 4)	14.3	2.3	14.5	15.4	25.2	19.8	18.7

Figure 16 reveals that nationally, 33.5% and 18.7% of learners performed at meeting and exceeding expectation respectively, in listening comprehension, while 18.5% performed at below expectation.

It can also be observed that learners in refugee camp schools showed comparatively weaker performance, with 24.7% of learners achieving at below expectation level and only 2.3% exceeding expectation, the lowest proportion across all categories.

Notably, learners in special schools, undertaking the aged based curriculum (AB) recorded the highest proportion of learners achieving at below expectation level (45.1%), indicating substantial challenges in listening comprehension whose administration was in signed exact English, to test their eye-listening skills.

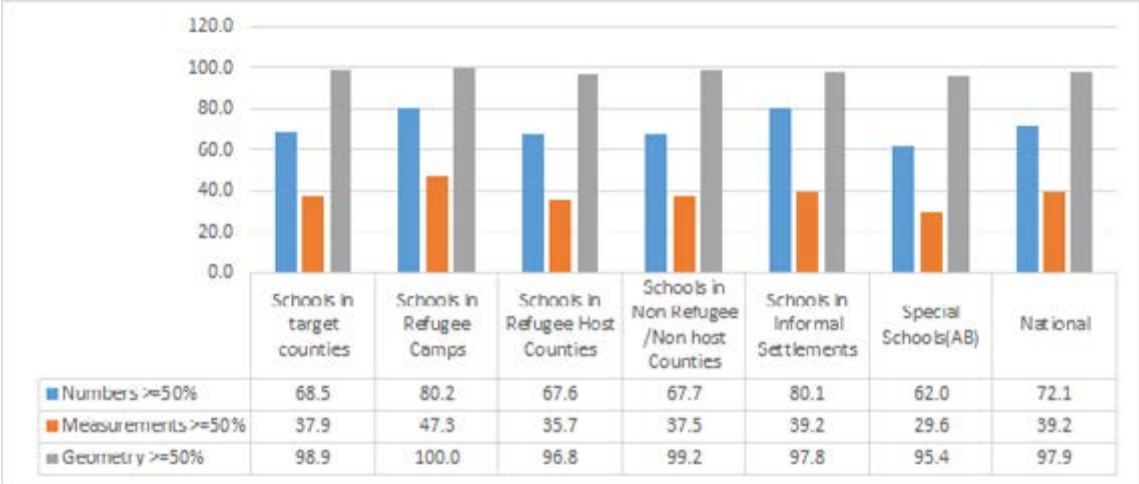
3.6.2 Mathematical Activities

The content area for Mathematical Activities at Grade 3 comprises three strands i.e Numbers, Measurement, and Geometry which were covered in the study.

3.6.2.1 Learners achieving minimum proficiency in Mathematical Activities by content area

The study sought to establish the percentage of learners achieving minimum proficiency in different Mathematical Activities content areas across various school categories in Kenya. The content areas covered were Numbers, Measurement and Geometry. The findings are presented in Figure 20.

Figure 20: Percentage of learners' achieving minimum proficiency in Mathematical Activities by content area



	Schools in target counties	Schools in Refugee Camps	Schools in Refugee Host Counties	Schools in Non Refugee /Non host Counties	Schools in Informal Settlements	Special Schools(AB)	National
Numbers >=50%	68.5	80.2	67.6	67.7	80.1	62.0	72.1
Measurements >=50%	37.9	47.3	35.7	37.5	39.2	29.6	39.2
Geometry >=50%	98.9	100.0	96.8	99.2	97.8	95.4	97.9

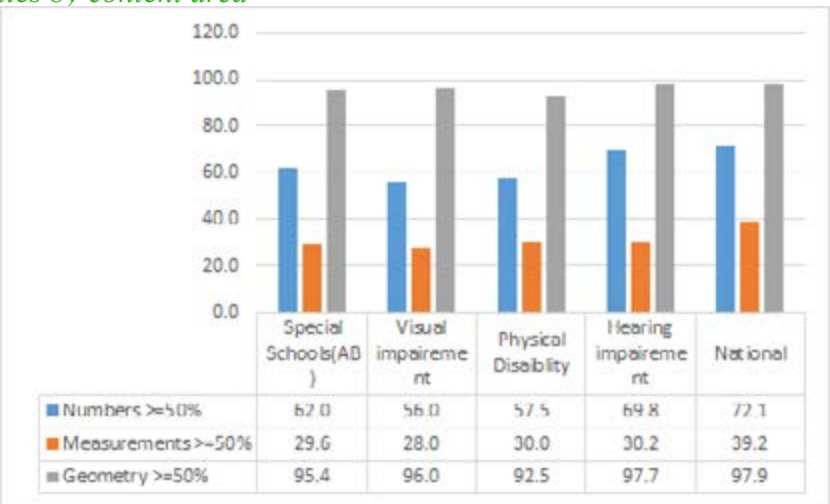
The findings in Figure 20 indicate that, nationally, the highest proportion of Grade 3 learners (97.9%) attained minimum proficiency in items on Geometry. Similarly, Geometry registered the highest proportion of learners attaining minimum proficiency across all school categories. The strand Measurement registered the lowest proportion of learners attaining minimum proficiency both nationally (39.2%) and across all categories of schools.

The findings also reveal that schools in refugee camps recorded the highest proportion of learners attaining minimum proficiency in all content areas i.e. Numbers (80.2%), Measurements (47.3%) and Geometry (100%). On the other hand, special schools registered the lowest proportion of learners attaining minimum proficiency in Numbers (62.0%), Measurements (29.6%) and Geometry (95.4%).

3.6.2.2 Percentage of Special Schools (Age Based) learners achieving minimum proficiency in Mathematical activities by content area

The study sought to establish the percentage of learners' achieving minimum proficiency in different Mathematical Activities content areas for learners in special schools (Age-based). The findings are presented in Figure 21.

Figure 21: Percentage of Special Schools (Age Based) learners' achieving minimum proficiency in Mathematical activities by content area



The findings in Figure 21 reveal that in the special school category, performance in Geometry recorded the highest proportion of learners achieving the 50% benchmark across the special school categories with hearing impairment at 97.7%, visual impairment at 96.0% and physical disability at 92.5%.

The findings also reveal that the lowest proportion of learners achieving the 50% benchmark was recorded in Measurement among learners with visual impairment (28.0%), hearing impairment (30.2%) and physical disability (30.0%)

3.7 Learner achievement in Foundation Level – Stage based-curriculum

NASMLA Midline study also focused on learners with special needs and disabilities in both the age-based and stage-based curricula. The tools for learners in the stage-based curriculum consisted of performance-based assessment tasks derived from the curriculum design for the Foundation Level. This report compares performance at Baseline and Midline studies in two learning areas: communication, social and pre-Literacy skills, and pre-numeracy activities.

3.7.1 Performance Tasks in the Baseline and Midline Studies

In baseline and Midline studies, learners were assessed in tasks derived from communication, social and pre-Literacy skills, and pre-numeracy activities learning areas. The assessment tasks are presented in Table 17:

Table 17: Assessment tasks used in both Baseline and Midline studies for Communication, Social and Pre-Literacy Skills and Pre-Numeracy Activities learning areas.

Paper	Targeted Level Learning Outcome	Task Description	
		Baseline	Midline
Communication, Social and Pre-Literacy Skills	The learner should be able to communicate appropriately using verbal and or non-verbal models in varied contexts	Using appropriate words to make requests.	Identifying items found in the classroom.
		Colouring the drawing of a hand and leg.	Colouring a sketch of a tree diagram within the outline as a prerequisite skill for writing.

Paper	Targeted Level Learning Outcome	Task Description	
		Baseline	Midline
e-numeracy Activities	The learner should be able to demonstrate basic literacy and numeracy skills for learning.	walking/ moving in a straight line	Rote counting numbers 1-5 sequentially.
		Sorting objects according to texture	Shading numbers are shaped from 1 to 5 within an outline.

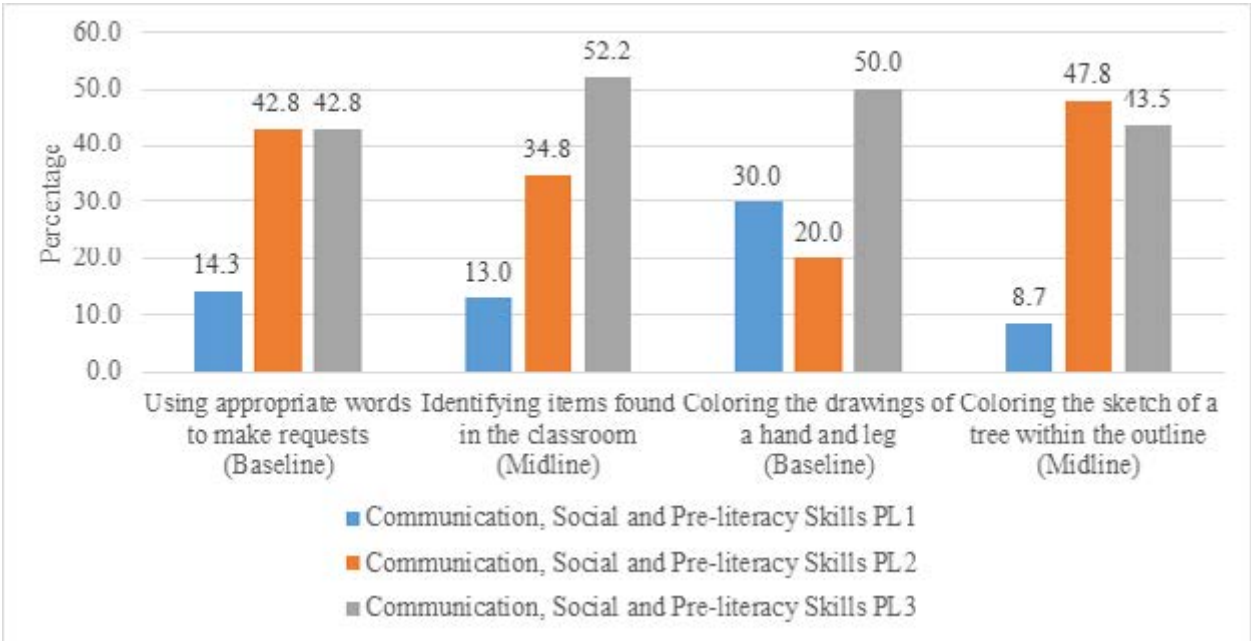
3.7.2 Scoring and Reporting of Learners Performance

In the studies, achievement of learners was reported in three performance levels: Level 3-Meeting Expectation (ME), Level 2-Approaching Expectation (AE) and Level 1 - Below Expectation (BE). Performance Level 3 indicates that the learner has acquired sufficient knowledge and skills for the tasks assessed, Performance Level 2 indicates that the learner has demonstrated acquisition of some skills/abilities but is yet to meet the standards fully. In contrast, Performance Level 1 indicates that the learner is yet to acquire the desired competency.

3.7.3 Communication Social and Pre-Literacy Skills

In this learning area, the targeted level learning outcome requires the learner to communicate appropriately using verbal and non-verbal models in various contexts. In both baseline and midline studies, two tasks (Task 1 and Task 2) were administered for each study. This report presents a comparative analysis of learner's achievements in Baseline and Midline studies as shown in Figure 22.

Figure 22: Comparative analysis in Baseline and Midline studies



In Figure 22, in the Baseline study, 42.86% of learners performed at meeting expectation level in the task that required them to use appropriate words to make requests while in the midline study 50.00% of learners performed level (Meeting Expectation) in the corresponding task 1 that required learners to identify items found in the classroom.

In these tasks, 14.29% of learners performed below expectation during the baseline study compared to 13.00% of learners who performed at the same level in the midline study. This indicates some improvement in learners' acquisition of skills for verbal or non-verbal communication possibly because of interventions that were implemented after the baseline study.

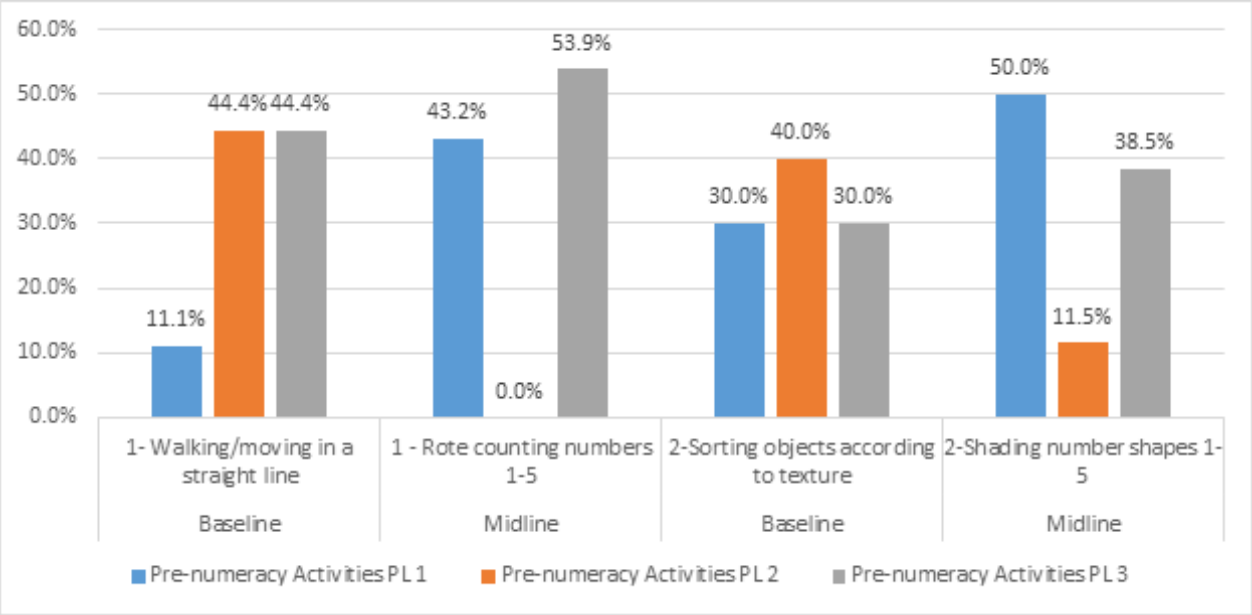
In task 2 of the baseline study where the task involved colouring the drawings of a hand and leg, 30.00% of the learners achieved below expectation,

compared to 8.7% of the learners on the corresponding task in the midline study of colouring the sketch of a tree within the outline. Similarly, this indicates that there was an improvement in learners' performance in the administered tasks from baseline to midline studies.

3.7.4 Pre-Numeracy Activities

In this learning area, the targeted level learning outcome requires learners to demonstrate basic literacy and numeracy skills for learning. In the baseline study, two tasks namely walking/moving in a straight line and sorting objects according to texture were administered; while in the midline study, learners were assessed in rote counting of numbers 1–5 and shading number shapes 1–5 as tasks 1 and 2 respectively. The outcomes are presented in Figure 23

Figure 23: Performance in pre-numeracy activities



In Figure 23, Task 1 for the baseline study, which involved walking/ moving in a straight line, 44.4% of the learners achieved the level of meeting expectation, compared to 53.9% in the corresponding Task 1 in the midline study. A similar trend was observed in baseline and midline studies where 11.1% and 43.2% of learners achieved below expectation respectively in corresponding tasks.

The trend observed herein depicts a significant performance improvement, possibly due to targeted interventions that were put in place after the baseline study.

In task 2 that required learners to sort objects according to texture, 30.0% of the learners achieved at the level of meeting expectation in baseline study compared to 38.5% performing at the same level in the corresponding task (shading numbers of shapes 1-5) in the midline study.

The findings further revealed that 30.0% and 50.0% of the learners achieved below expectation in the task of sorting objects according to texture and in the task of shading numbers of shapes 1-5 respectively. These trends evidenced an improvement in performance due to the implemented interventions that were implemented prior to the midline study.

3.7.7 Assessment of Core Competencies

Learners were also assessed in the core competencies of imagination and creativity and learning to

learn in the baseline and midline studies respectively. Achievement of learners in the two core competencies is shown in Table 18

Table 18: Performance in the Core Competency Tasks

Study	Core Competency	PL 1	PL 2	PL 3
Baseline	Imagination and Creativity	11.11%	55.56%	33.33%
Midline	Learning to learn	46.20%	3.90%	50.00%

From Table 18, it can be observed that 33.3 % of learners performed at the level of meeting expectation in the baseline study compared to 50.0% of learners performing at the same level in the midline study indicating a significant improvement in the acquisition of core competencies among learners with special needs in the stage-based curriculum. However, it is worth noting that a significant proportion of learners (46.20%) performed below expectation in the core competency of learning to learn, calling for teachers to engage learners in experiences that nurture learning to learn.

3.8 Core Competency Acquisition

The analysis of competency development among learners highlights significant variations across different school categories, reflecting disparities in access to resources, learning environments, and support systems. The learners were asked questions to understand their level of acquisition of core competencies. The findings are presented in Table 19.

Table 19: Acquisition of core competencies among learners

Competency	Target Counties	Refugee Camps	Refugee Host Counties	Non-Refugee Counties	Informal Settlements	Special Schools (AB)	National
Communication & Collaboration composite Index	83.1%	90.4%	88.7%	81.8%	82.0%	70.6%	83.0%
Critical Thinking and Problem Solving Composite Index	84.8%	91.0%	91.5%	83.4%	87.8%	72.7%	86.1%
Creativity & Imagination Composite Index	79.7%	87.7%	87.6%	78.1%	85.9%	63.5%	82.3%
Learning to learn Composite Index	83.9%	89.6%	88.2%	82.8%	83.1%	79.3%	84.6%
Self-Efficacy Composite Index	86.0%	88.5%	94.1%	84.7%	91.6%	73.9%	88.3%
Digital Literacy Composite Index	82.5%	89.4%	93.9%	80.3%	89.4%	80.3%	86.2%

Consistent with existing global competency assessment benchmarks, the core competences were analyzed at four levels: Below 70% (Critical concern), 70-79% (Developing), 80-89% (Proficient) and 90-100% (Exemplary).

Table 19 shows that nationally, more than 80% of learners had acquired the core competencies across

the different school categories. Overall, learners demonstrated strong proficiency in these competencies, with the highest proportions recorded in Self-Efficacy (88.3%), Digital Literacy (86.2%), and Critical Thinking and Problem-Solving (86.1%).

However, learners in Special Schools (AB) were largely at the *developing* level across most competencies, while Creativity and Imagination was rated at the *concern* level, indicating an urgent need for intervention. This relatively low acquisition may be linked to inadequate facilities and limited staffing, which constrain opportunities for learners to develop these competencies effectively. This observation is supported by findings from Nzabandora et al., which indicate that inclusive education resources account for 64.5% of the variance in competencies among learners with disabilities, underscoring the strong relationship between resource availability and competency development.

Among the school categories, schools in refugee host counties recorded the highest acquisition of core competencies. Learners in these schools attained an *exemplary* level in Self-Efficacy, Digital Literacy, and Critical Thinking and Problem-Solving, and a *proficient* level in Communication and Collaboration, Learning to Learn, and Creativity and Imagination.

These findings were reinforced by parents during focus group discussions. Parents reported noticeable improvements in their children's critical thinking and problem-solving abilities, citing examples such as children independently mending their uniforms or helping organize younger siblings. For instance, a parent from Isiolo County said, *"These children can now mend their own uniform without waiting for a parent to do it… they can also organize their younger siblings."* As relates to Digital Literacy acquisition, a parent from Kitui County stated, *"I hardly allow my kids to use my phone, but some homework requires them to Google. There was a Bible story that he wanted to find, and I had to Google it for him."* Self-efficacy was highlighted, with a parent from Nyeri County explaining, *"CBC makes children active and self-aware. They are more independent in learning."*

3.9 Factors Influencing Learner Achievement in English Language Activities and Mathematical Activities

This section presents the results of the regression analysis which helps in the understanding of the extent to which contextual factors and interventions influence learner achievement in the assessed learning areas.

3.9.1 Multilevel Analysis Model

In education research, students are often clustered in schools, with students in the same school exposed to certain social contexts that could influence their learning achievement compared to students in a different school (Goldstein et al., 2007). Thus, multilevel linear regression was adopted to understand the individual, school characteristics and interventions that are significantly associated with learning achievement among Grade 3 learners in Kenya. Multilevel Linear Regression involves modelling and analyses of hierarchical data. In the context of this study, the hierarchy involves Level 1 and Level 2 variables (factors) as indicated in chapter one of this report. In this hierarchy, students (Level 1) were nested within schools (Level 2). As is the case in a typical regression analysis for multilevel data, the dependent variable (in this case learners' achievement) is measured at the lowest level of hierarchy.

Multilevel analysis in this study was undertaken using Stata Version 17. Following the logic employed by Raudenbush and Bryk (2002) in their descriptions of these types of models, multivariate data matrices for English Language Activities and Mathematical Activities were created. Some of the variables hypothesized to influence learners' achievement is presented in following paragraphs.

Learner characteristics: In this study, learner characteristics were associated with learner achievement in the English Language Activities and Mathematical Activities learning areas. They include the

sex and age of the learner, absenteeism, school facilities and availability of learning materials (textbooks) among others. The frequency of homework done by the learner was also significantly associated with learner achievement in both learning areas.

Headteacher and school characteristics: This study also investigated whether headteacher and school characteristics had a bearing on learner achievement. Characteristics of interest included: age, gender, professional training, the quality of parent-school relationship, among others.

Teacher characteristics: This study examined whether teacher characteristics had a bearing on learner achievement. The characteristics of interest included: age, gender, professional training, experience, in-service training, giving of homework, and assessment among others.

3.9.2 Multilevel Results

The multilevel approach focused on the Project Appraisal Document (PAD) interventions on the program questions, addressing the specific interventions were identified, selected and adapted as input variables within the multilevel model. This model consists of two levels i.e. the learner (individual level) and the school level. The model considers intervening factors affecting learner performance in relation to the interventions of the program.

The multilevel approach focused on the Project Appraisal Document (PAD) program interventions. Specific interventions were identified, selected, and adapted as input variables in the multilevel model. The model consists of two levels: the learner (individual level) and the school (institutional level). It examines how these interventions, together with other intervening factors, influence learner performance.

Table 20 depicts the variables that were found to have a significant influence on learner achievement. The variables were selected in line with the interventions of the KPEEL program and attempt to demonstrate the influence of the interventions on learner achievement in English Language activities and Mathematical Activities.

The highlighted p-values show variables of interest with a significance of 0.05 or less. This means that the coefficient is highly significant and has a bearing on the learner's achievement in the corresponding subject.

Table 20: Factors Influencing Learner Achievement using Multilevel Analysis

	Target Counties	1.LPC	-1.63	0.01*	-0.83	0.13
			English		Mathematics	
	Variable Description	Variable	Coefficient	P value	Coefficient	P value
Learner level variables	Learner gender - Base is male	2.LGENDER	0.66	0.00*	-0.09	0.59
	Learner Attendance - Base is not attending	1.LATTENDANCE	0.51	0.03*	-0.05	0.82
	Learner Homework duration - Base is Less than 1 hour	LHMWKDURATION				
	1 to 2 hrs	1 to 2 hrs	-1.44	0.00*	-0.09	0.65
	Above 2 hrs	Above 2 hrs	-1.47	0.00*	-0.04	0.87
	Doing homework always Base is No	1.LHMWK_ALWAYS	0.59	0.05*	0.19	0.46
	Very difficult	Very difficult	-0.89	0.00*	-0.1	0.68

	Target Counties	1.LPC	-1.63	0.01*	-0.83	0.13
			English		Mathematics	
	Variable Description	Variable	Coefficient	P value	Coefficient	P value
	Weekly	Weekly	-0.67	0.03*	0.19	0.46
	Every two weeks	Every two weeks	-1.27	0.00*	0.26	0.34
	Every month	Every month	-0.94	0.02*	0.26	0.42
	*Daily homework provided in the following learning area Mathematics	1.LHMW_AREA2	0.66	0.00*	-0.01	0.96
	Learner repetition	1.LREPEAT	-0.79	0.00*	0.09	0.58
	English textbook available	1.LRESOURCE1	0.12	0.66	-0.52	0.02*
	Mathematics textbook available	1.LRESOURCE2	0.99	0.00*	0.56	0.01*
	Beaten by the teacher	1.LTEACH_DISCIPLINE1	0.79	0.00*	-0.21	0.33
School level Variables		HTAGE	-0.19	0.16	-0.23	0.06
	Dropout cases in school	1.DROPOUT_CASES	-1.75	0.00*	-1.44	0.00*
	Teacher Gender	2.TGENDER	1.09	0.02*	-0.65	0.15
	TSC Registered Teacher	1.TTSC	-2.14	0.01*	-1.21	0.13
	Frequency Teacher professional development	TPAD -Never				
		Sometimes	0.84	0.11	0.16	0.73
		Frequently	2.23	0.01*	2.6	0.00*
		Very frequently	4.16	0.00*	3.98	0.00*
		_cons	23	0	22.81	0

***Significant at the 0.05 level**

3.9.3 Multilevel analysis results Interpretation

Learner Level Variables

On learner level variables, learner gender and attendance were found to have a significant effect on achievement in English. It is observed that girls were likely to obtain 0.66 more points than boys in English. This was found to be significant at $p<0.05$ level. Additionally, learners who attend school regularly are likely to obtain 0.51 more points than their counterparts in English activities. This was found to be significant at the ($p=0.03$)

1. Target Counties (1.LPC): Interpretation: Learners from the target counties are likely to obtain lower points than their counterparts in English and Mathematics activities. These learners are likely to obtain 1.63 less points in English activities compared to the counterparts. This was found to be significant (p-value =0.01). In Mathematics however, though the result was not significant, a similar trend was observed. Learners in the target counties are

likely to obtain 0.83 (p value=0.13) less points in Mathematics compared to their counterparts.

2. Learner Gender (2. LGENDER): Gender has a statistically significant effect on English scores, with girls predicted to score 0.66 points higher than boys. In contrast, the effect of gender on Mathematics scores is not statistically significant (p = 0.59), although the model points to a slight, negligible advantage of 0.09 points for boys.

3. Learner Age (LAGE): Age does not significantly impact either English or Mathematics scores, however the older a learner is the less points the learner is likely to obtain in English 0.31(p value = 0.19) and Mathematics activities 0.2 (p-value = 0.31).

4. Learner Attendance (1. LATTENDANCE: While attendance is not a significant predictor of Mathematics scores, it does have a significant positive impact on English achievement; specifically, students with regular attendance are expected to score 0.51 points higher in English (p = 0.03).

5. Learner Homework Duration (LHMWKDURATION): Longer homework duration significantly negatively impacts English scores but not Mathematics scores. Learners who take more than 1 hour to complete an assignment are likely to obtain at least 1.44(p value = 0.00) less points than their counterparts who spend less time doing homework. Similarly in mathematics, learners who spent more than 1 hour were likely to obtain 0.09 (p value = 0.65) less points in Mathematics compared to their counterparts who spent less time completing their assignments. This was, however, found not to be significant at the 0.05 level.

6. Difficult Homework (LHMWK_DIFFICULT):

While very difficult homework has no statistically significant impact on Mathematics scores (coefficient = -0.10), it is a significant negative predictor for English. In English, students assigned very difficult homework are expected to score 0.89 points lower than those given easier homework (p < 0.001).

7. Homework Assistance by Teacher (LHMWK_TEACHER): Teacher assisting learners with homework has a statistically significant influence in English and Mathematics scores. The frequency of teacher assisting in homework on a daily basis has a direct positive impact in learner achievement in English activities, where learners assisted by teachers are likely to obtain at least 1.27 (p value = 0.00) more points as opposed to their counterparts who receive assistance every two weeks. A similar trend was observed for learners who received assistance from their teachers on a daily basis in Mathematics activities. Learners who receive assistance on a daily basis are likely to obtain 0.26 more points than learners who received assistance every two weeks. This was, however, found not to be statistically significant.

8. English Textbook Available (1.LRESOURCE1): Availability of English textbooks does not significantly impact English scores, however learners who have English text books are likely to obtain 0.12 more points than their counterparts who do not have English text books.

9. Mathematics Textbook Available (1.LRESOURCE2):

The availability of a mathematics textbook significantly benefits student performance in both subjects. Students with textbook are predicted to score significantly higher in both English (coefficient = 0.99; p < 0.001) and Mathematics (coefficient = 0.56; p = 0.01) compared to those without one.

3.9.4 School Level Variables

1. Dropout Cases in School (1.DROPOUT_CAS-

ES) : Higher dropout cases significantly negatively impact both English and Mathematics scores. Learners in schools with higher dropout cases are likely to obtain 1.75(p value = 0.00) and 1.44 (p value = 0.00) less points than their counterparts in schools with lower dropout cases. This was found to be significant in both English activities and Mathematics activities.

2. Teacher Gender (2.TGENDER): Teacher gender significantly affects English scores but not Mathematics scores. Learners in schools taught by female English teachers are likely to obtain 1.09 more points in English activities compared to their counterparts in schools with learners taught English by a male teacher. However, learners with male Mathematics teachers are likely to obtain 0.65 more points in Mathematics activities as opposed to their counterparts who have a female Mathematics teacher.

3. Frequency of Teacher Professional Development (TPAD): Learners of Teachers who have had more professional development sessions are likely to obtain 4.16(p-value = 0.00) more points in English activities and 3.98(p-value = 0.00) more points in Mathematics compared to their counterparts whose teachers have less professional development. This was found to be significant in both English and Mathematics activities.

3.10 Attainment of the KPLEEL project Key performance Indicators

The project indicators for the midline study in comparison with the baseline study are presented in Table 21.

Table 21: PDO Indicators: NASMLA Grade 3 Midline Study (2024)

Result Area	PDO Indicator	Baseline	Status	Proposed End Target
		2022	(June 2024)	
Equalize learning opportunities: improve learning outcomes in target counties and for refugee populations	ENGLISH ACTIVITIES			
	Increase in the share of students achieving higher order competencies in literacy in the NASMLA Grade 3 assessment, in Counties falling into the lowest quintile of performers (Percentage)	29.9%	36.6%	38.6%
	Increase in the share of students achieving higher order competencies in literacy in the NASMLA[1] Grade 3 assessment in refugee schools (Percentage)	30.9%	40.5%	42.5%
	Increase in the share of students achieving higher order competencies in literacy in the NASMLA Grade 3 assessment, in Refugee Host Counties (Percentage)	21.8%	24.1%	26.1%
	Increase in the share of students achieving higher order competencies in literacy in the NASMLA Grade 3 assessment, in Non-refugee/Host Communities (Percentage)	18.3%	38.4%	40.4%

Result Area	PDO Indicator	Baseline	Status	Proposed End Target
		2022	(June 2024)	
	MATHEMATICS ACTIVITIES			
	Increase in the share of students achieving higher order competencies in numeracy in the NASMLA Grade 3 assessment, in Counties falling into the lowest quintile of performers (Percentage)	18.9%	27.6%	29.6%
	Increase in the share of students achieving higher order competencies in numeracy in the NASMLA[1] Grade 3 assessment in refugee schools (Percentage)	25.6%	29.1%	31.1%
	Increase in the share of students achieving higher order competencies in numeracy in the NASMLA Grade 3 assessment, in Refugee Host Counties (Percentage)	20.9%	25.7%	27.7%
	Increase in the share of students achieving higher order competencies in numeracy in the NASMLA Grade 3 assessment, in Non-refugee/Host Communities (Percentage)	20.1%	27.8%	29.8%

From Table 21, it is observable that there is a notable improvement in the proportion of learners attaining the minimum proficiency in both English language Activities and Mathematical Activities in the midline study. For instance, in counties falling in the lowest quintile, the proportion of learners attaining minimum proficiency in English language activities increased from 29.9% at baseline to 36.6% at midline. Similarly, the proportion of learners attaining the minimum proficiency in mathematical activities increased from 18.9% to 27.6 % at baseline and midline respectively.

CHAPTER FOUR 4

LEARNER AND TEACHER CONTEXTUAL FACTORS

4.1 Introduction

This chapter presents findings on learner and teacher demographic, home background and school-related contextual factors that affect teaching and learning.

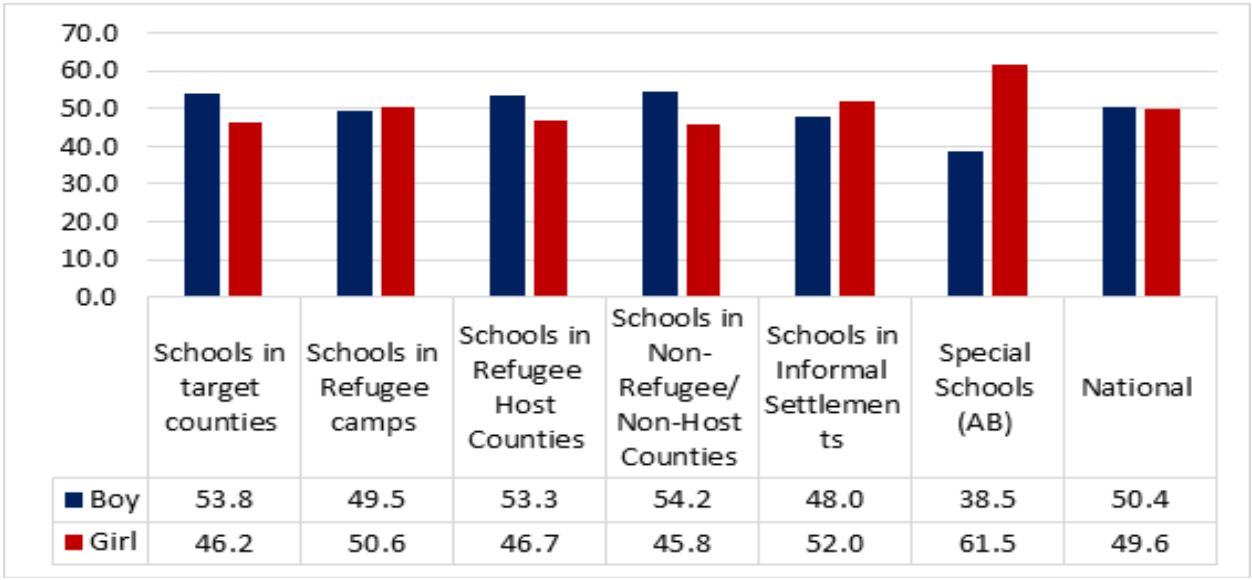
4.2 Learner Demographics and Contextual Factors

Learners play a crucial role in the education system, and they are significantly affected by their home and school environments. This study examines the important contextual factors that affect learner's access to education, participation, and overall outcomes. Data was collected across different contexts, analysed, summarised and presented in figures and tables under the following sub-headings and themes.

4.2.1 Learner demographics

Gender distribution of learners: SDG 4 Target 4.1 aims for all children to complete quality education by 2030, with a focus on gender equality. In Kenya, the Education Sector Gender Policy (2015) seeks to reduce gender disparities in education. This study analysed data on Grade 3 learners' gender distribution across different school context and results presented in Figure 24.

Figure 24: Gender Distribution of Learners

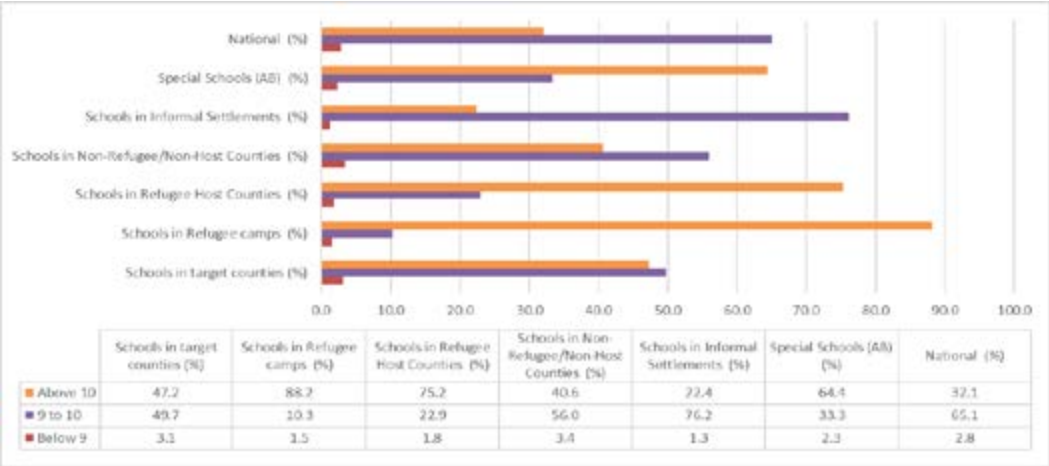


	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/ Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Boy	53.8	49.5	53.3	54.2	48.0	38.5	50.4
Girl	46.2	50.6	46.7	45.8	52.0	61.5	49.6

Figure 24 shows that there were slightly more boys (50.4%) than girls (49.6%) nationally, consistent with the 2024 Economic Survey (KNBS, 2024). In schools located in refugee camps, there were more girls than boys at 50.6% and 49.5% respectively. The same trend was observed in schools in informal settlements (52.0% vs. 48.0%) and in Special schools (61.5% vs. 38.5%). These findings point to context-specific gender dynamics that may require targeted advocacy for equitable enrolment.

Age distribution of learners: Learner age is a critical determinant of school readiness and academic progression, as it influences cognitive development and classroom engagement (Momanyi et al., 2015). To assess whether learners in different school context had met age-appropriate expectation for Grade 3, the study analysed data from different schools on age distribution, and the results are presentation in Figure 25.

Figure 25: Age Distribution of Learners

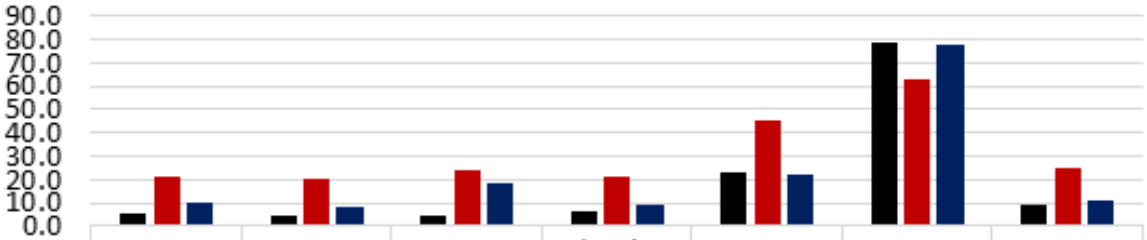


	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Above 10	47.2	88.2	75.2	40.6	22.4	64.4	32.1
9 to 10	49.7	10.3	22.9	56.0	76.2	33.3	65.1
Below 9	3.1	1.5	1.8	3.4	1.3	2.3	2.8

Figure 25 shows 65.1% of Grade 4 learners were within the expected age range of 9 to 10 years, while 32.1% were overage and 2.8% underage, nationally. Schools in Informal settlement had the highest proportion of age-appropriate learners (76.2%), indicating stronger alignment with recommended enrolment practices. However, the large share of overage learners, particularly in refugee host counties (75.2%), raises concern, as overage status increases the likelihood of dropout, while underage learners face higher repetition risks (UNESCO, 2009). Age appropriateness is also positively associated with improved academic performance (Ciera & Oguna, 2021), highlighting the need to reinforce timely enrolment and progression policies nationally.

Learners with Disabilities: The Basic Education Act, (2013) affirms the right of every child to free and compulsory basic education, including children with disabilities, in alignment with the Constitution of Kenya 2010 (RoK, 2010). To determine the extent to which this commitment to inclusive education is reflected in practice across the study sites, the study analysed data on the types of disabilities among learners as reported by learners and Heads of Institutions within the age-based curriculum. The results of this analysis are presented in Figures 26a, 26b, and 27.

Figure 26a: Type of Disabilities as Indicated by Learners in the Age-based Curriculum

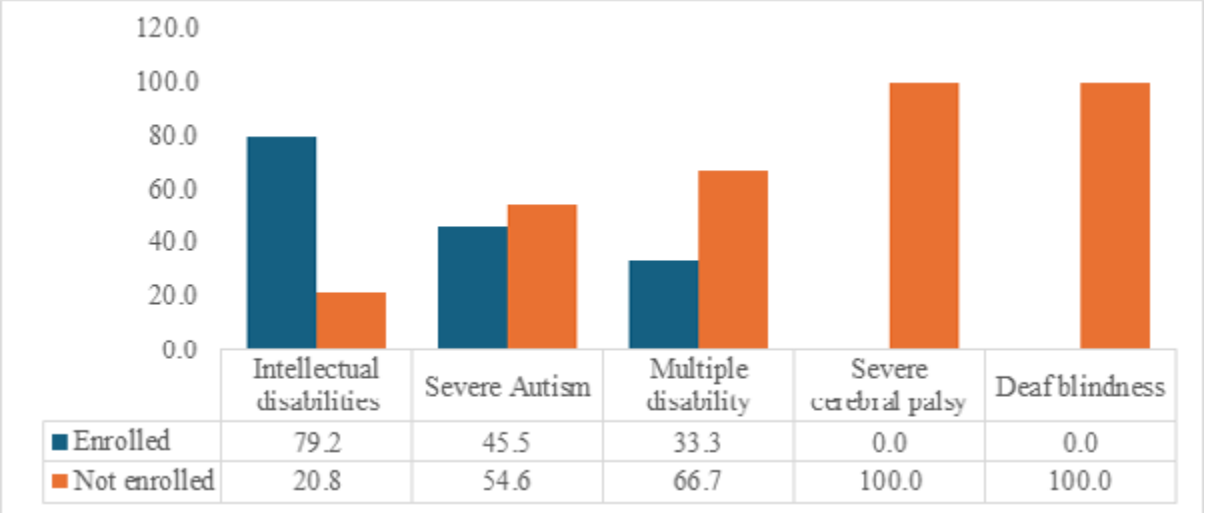


	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/ Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Hearing/Deaf	5.8	4.4	4.6	6.1	23.1	78.3	9.1
Physical	21.5	20.3	23.9	21.2	45.4	62.9	25.1
Visual/blind	10.6	8.7	18.0	9.4	22.2	77.5	10.8

As illustrated in Figure 26a, nationally, 25.1% of learners with disabilities were reported to have physical disabilities, followed by (10.8%) with visual impairments. Within Special Schools following the Age-Based (AB) curriculum, hearing impairment (78.3%), visual impairment (77.5%), and physical disabilities (62.9%) were the most prevalent categories reported. This concentration suggests that these special schools serve a substantial proportion of learners with sensory and physical impairments, placing significant demands on infrastructure, assistive devices, and specialised instructional support.

Further, to assess the type of disabilities among learners in the stage-based curriculum, this study analysed data on enrolment based on different categories of disabilities as reported by the teachers, and the findings are presented in Figure 26b.

Figure 26b: Type of Disabilities among Learners in the Stage Based Curriculum

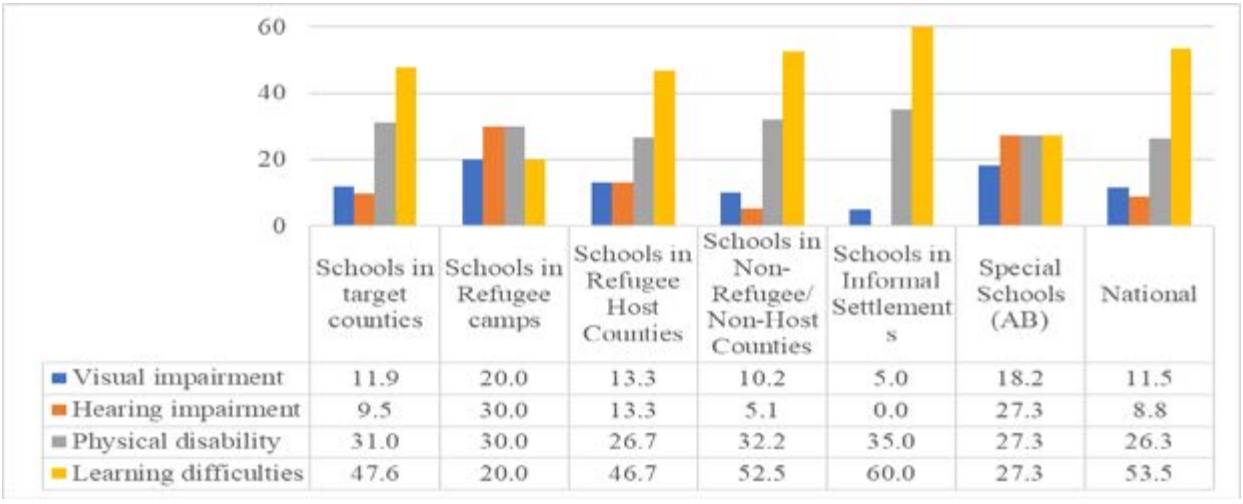


	Intellectual disabilities	Severe Autism	Multiple disability	Severe cerebral palsy	Deaf blindness
Enrolled	79.2	45.5	33.3	0.0	0.0
Not enrolled	20.8	54.6	66.7	100.0	100.0

As shown in Figure 26b, the majority of learners in the Stage-Based (SB) pathway (79.2%) were reported to have intellectual disabilities, with no cases of severe cerebral palsy or deaf-blindness documented. This pattern aligns with the findings of the 2018 Kenya Institute of Special Education (KISE) Survey, which identified intellectual disabilities as the most prevalent disability type in the country. The concentration of intellectual disabilities underscores the need for specialised instructional support and targeted interventions within SB schools, while the absence of learners with complex conditions such as severe cerebral palsy or deaf-blindness points to potential access gaps for children with more intensive support needs.

Additionally, Heads of Institutions were asked to indicate the type of disabilities among learners. The findings are summarised in Figure 27.

Figure 27: Learner Type of disabilities as indicated by Heads of Institutions



	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/ Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Visual impairment	11.9	20.0	13.3	10.2	5.0	18.2	11.5
Hearing impairment	9.5	30.0	13.3	5.1	0.0	27.3	8.8
Physical disability	31.0	30.0	26.7	32.2	35.0	27.3	26.3
Learning difficulties	47.6	20.0	46.7	52.5	60.0	27.3	53.5

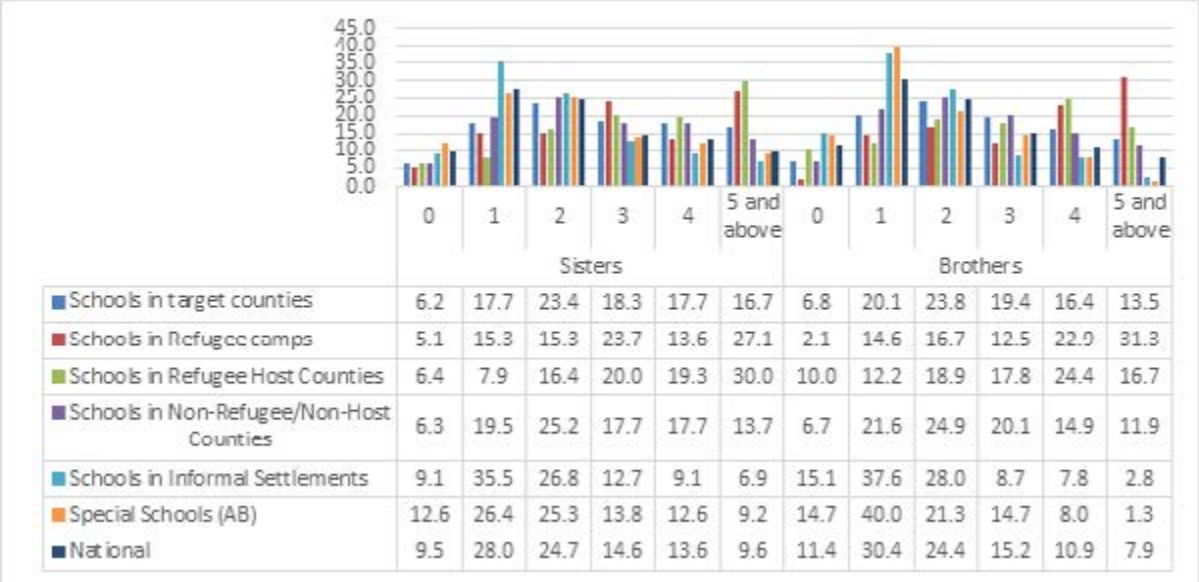
Subsequently, Figure 27 reveals that the most dominant type of disability was learning disabilities at 53.5% nationally, especially in schools located in informal settlements (60.0%) and those in target counties (47.6%). This signals the urgent need for strengthened screening, inclusive pedagogy, and resource allocation to address widespread cognitive-related barriers (KISE, 2018; Ministry of Education, 2018).

4.2.2 Learner Contextual Factors at Home

Home background characteristics play a crucial role in shaping how well learners achieve, as they influence children's social, economic, and cognitive environments. This study examined variations across different types of schools using home contextual factors like number of siblings, household size, parental occupation, meal availability, home language, lighting for homework, and learners' domestic responsibilities. The findings are presented in the corresponding figures.

Number of Siblings: For the first item which assessed the influence of home characteristics on learner achievement, the study collected data regarding the number of siblings (boys and girls) living in the same household as the learner. This data was analysed, and the results are summarised in Figure 28.

Figure 28: Number of Siblings

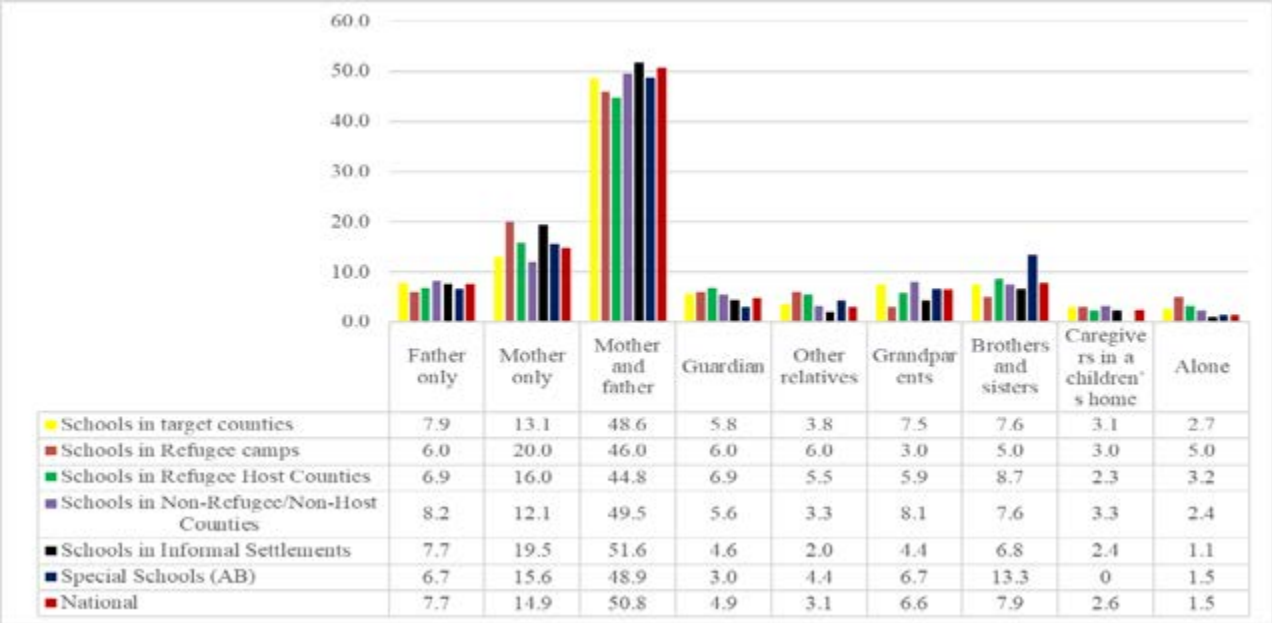


	Sisters						Brothers					
	0	1	2	3	4	5 and above	0	1	2	3	4	5 and above
Schools in target counties	6.2	17.7	23.4	18.3	17.7	16.7	6.8	20.1	23.8	19.4	16.4	13.5
Schools in Refugee camps	5.1	15.3	15.3	23.7	13.6	27.1	2.1	14.6	16.7	12.5	22.0	31.3
Schools in Refugee Host Counties	6.4	7.9	16.4	20.0	19.3	30.0	10.0	12.2	18.9	17.8	24.4	16.7
Schools in Non-Refugee/Non-Host Counties	6.3	19.5	25.2	17.7	17.7	13.7	6.7	21.6	24.9	20.1	14.9	11.9
Schools in Informal Settlements	9.1	35.5	26.8	12.7	9.1	6.9	15.1	37.6	28.0	8.7	7.8	2.8
Special Schools (AB)	12.6	26.4	25.3	13.8	12.6	9.2	14.7	40.0	21.3	14.7	8.0	1.3
National	9.5	28.0	24.7	14.6	13.6	9.6	11.4	30.4	24.4	15.2	10.9	7.9

Figure 28 shows that nationally, most learners reported having one sister (28.0%) or one brother (30.4%), reflecting relatively moderate family sizes. However, families with learners who had more siblings (five or more siblings) were more common in refugee camps (31.3%) and in host counties (16.7%), thus contributing to the families exceeding Kenya's average household size of 3.8 persons. This pattern suggests higher household burden thus increasing dependency ratios in refugee and host communities, potentially increasing financial strain and limiting household educational resources, a trend also observed by Schneiderheinze and Lücke (2020). Larger family sizes may reduce individualised parental attention and access to learning materials, factors associated with lower academic teaching and achievement (Agolli & Hasmeta, 2025). Consequently, learners in these contexts may face heightened educational vulnerability.

Person the Learner Lives With: For the second item which assessed the influence of home characteristics on learner achievement, the study collected data regarding who the learner lives with in the same household and the results were analysed and summarised in Figure 29.

Figure 29: Person the Learner Lives with



	Father only	Mother only	Mother and father	Guardian	Other relatives	Grandparents	Brothers and sisters	Caregivers in a children's home	Alone
Schools in target counties	7.9	13.1	48.6	5.8	3.8	7.5	7.6	3.1	2.7
Schools in Refugee camps	6.0	20.0	46.0	6.0	6.0	3.0	5.0	3.0	5.0
Schools in Refugee Host Counties	6.9	16.0	44.8	6.9	5.5	5.9	8.7	2.3	3.2
Schools in Non-Refugee/Non-Host Counties	8.2	12.1	49.5	5.6	3.3	8.1	7.6	3.3	2.4
Schools in Informal Settlements	7.7	19.5	51.6	4.6	2.0	4.4	6.8	2.4	1.1
Special Schools (AB)	6.7	15.6	48.9	3.0	4.4	6.7	13.3	0	1.5
National	7.7	14.9	50.8	4.9	3.1	6.6	7.9	2.6	1.5

From Figure 29, it shows that nationally, about half (50.8%) of learners live with both parents, a trend consistent across most subpopulations. However, 5.0% largely from refugee camps reported living alone. The figure also reflects variations where some learners reside with a single parent or guardian, indicating diverse household structures.

While dual-parent households may provide greater emotional and academic stability, learners living alone or without biological parents may face increased vulnerability. Evidence shows that students living with two biological parents generally perform better academically and demonstrate improved well-being, whereas those with one or no biological parent experience comparatively poorer outcomes (Schlecht, 2024).

Parental Focus Group Discussions further highlighted the influence of parents' moral guidance and behaviour on learners' conduct and academic engagement, underscoring the importance of strengthened parental engagement (UNESCO, 2015).

Parent/Guardian Occupation: For the third item, which assessed the influence of home characteristics on learner achievement, the study collected data regarding the occupations of learners' parents or guardians. The results are summarised in Table 22.

Table 22: Parent/Guardian Occupation

Occupation	Parent/ Guardian	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/ Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Employed	Father	52.7	42.3	42.2	55.4	41.9	57.5	47.2
	Guardian	11.0	26.9	12.1	9.8	15.4	2.5	12.0
	Mother	36.4	30.8	45.8	34.8	42.7	40.0	40.8
Farming	Father	39.1	57.1	48.2	37.4	32.5	42.4	38.7
	Guardian	15.1	7.1	23.2	14.3	24.6	9.1	13.6
	Mother	45.8	35.7	28.6	48.3	43.0	48.5	47.8

Occupation	Parent/ Guardian	Schools in target counties	Schools in Ref-ugee camps	Schools in Refugee Host Coun-ties	Schools in Non-Ref-ugee/ Non-Host Counties	Schools in Informal Settle-ments	Special Schools (AB)	Nation-al
Business	Father	42.8	42.9	46.8	41.9	38.9	32.0	41.6
	Guardian	11.4	14.3	10.1	11.5	4.5	8.0	9.1
	Mother	45.8	42.9	43.0	46.6	56.7	60.0	49.3
I do not know	Father	35.2	35.5	48.5	32.8	28.4	43.8	34.0
	Guardian	27.5	12.9	15.2	32.2	28.4	18.8	29.3
	Mother	37.3	51.6	36.4	35.0	43.2	37.5	36.7

It is evident from Table 22 that nationally, 49.3% of learners reported that their mothers are engaged in a business, while 47.2% indicated that their fathers are employed, a pattern largely consistent across all school types. Although parental involvement in a business or formal employment reflects economic activity that is likely to strengthen their resource capacity for supporting child's learning needs, it may also reduce the time available for parents to support their children with schoolwork at home. Parents nonetheless retain important educational responsibilities such as assisting his or her child in doing homework or school project beyond working hours (Alfarisi, 2021), and parental occupation and socioeconomic status significantly influence children's learning opportunities and home resource availability (Ardhiyah, 2019).

Availability of Regular Meals: For the fourth item, which assessed the influence of home characteristics on learner achievement, the study collected data on the availability of regular meals among learners. This data was analysed, and the results are presented in Figure 30.

Figure 30: Availability of regular meals per day

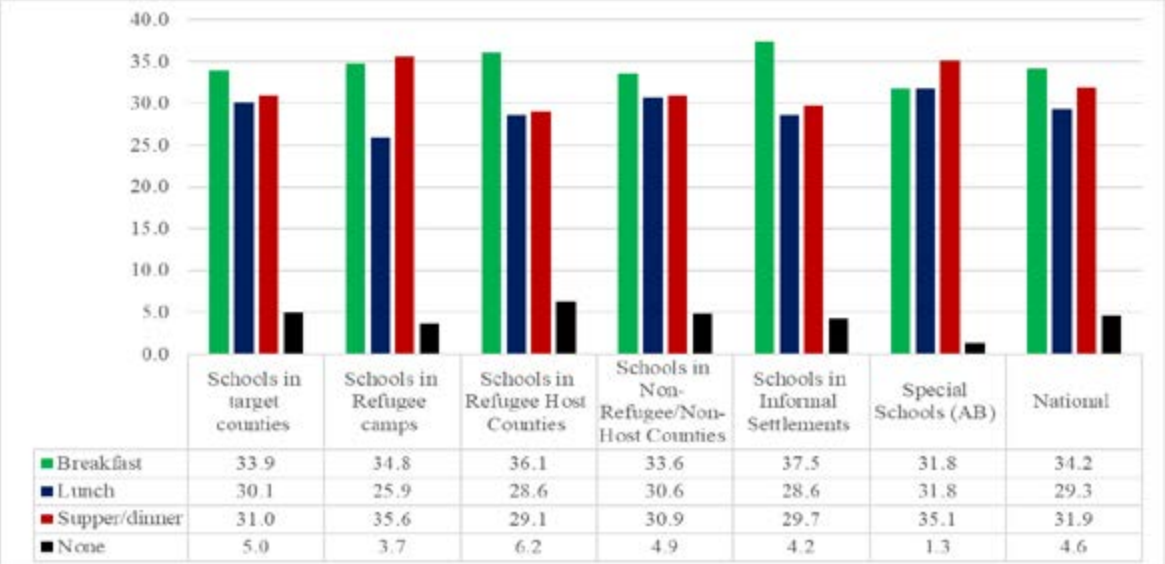
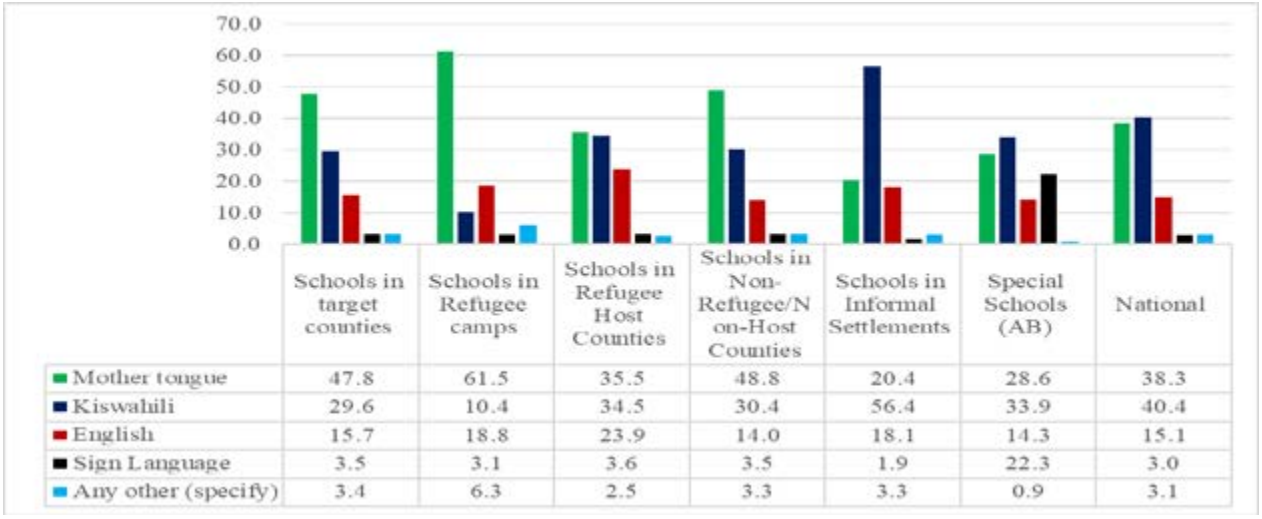


Figure 30 shows that nationally, only 34.2% of learners eat breakfast daily, with fewer consuming lunch (29.3%) or dinner (31.9%), while 4.6% reported having no meals. Meal skipping was highest in refugee host counties (6.2%) and target counties (5.0%). These findings indicate that many learners take irregular meals, which can affect focus, cognitive development, and academic performance. Consistent access to meals is essential for learning (Glewwe et al., 2021). Interventions such as school feeding programs are critical, particularly in vulnerable regions, to support learners' health through regular meals that may enhance better educational outcomes (Adinew, 2021).

Learner's Primary Home Language: For the fifth item, which assessed the influence of home characteristics on learner achievement, the study collected

data regarding the language mostly used by learners at home. This data was analysed and the results are presented in Figure 31.

Figure 31: Learner's Primary Home Language

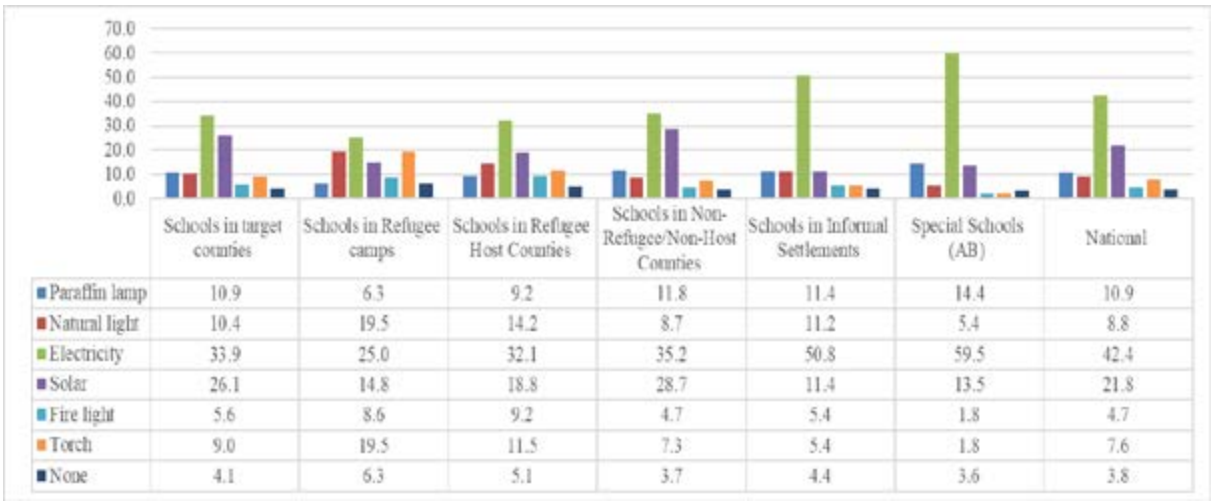


	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Mother tongue	47.8	61.5	35.5	48.8	20.4	28.6	38.3
Kiswahili	29.6	10.4	34.5	30.4	56.4	33.9	40.4
English	15.7	18.8	23.9	14.0	18.1	14.3	15.1
Sign Language	3.5	3.1	3.6	3.5	1.9	22.3	3.0
Any other (specify)	3.4	6.3	2.5	3.3	3.3	0.9	3.1

Figure 31 reveals that nationally, most learners use Kiswahili (40.4%) or Mother Tongue (38.3%) at home, while fewer use English (15.1%) or Kenyan Sign Language (3.0%). The 61.7% that reported not using Mother Tongue suggests potential misalignment with early grade instruction. Since home–school language mismatch undermines reading achievement (Wawire et al., 2025), strengthening implementation of Kenya's language policy may be useful in enhancing literacy development and parental engagement.

Source of Lighting for Homework: For the sixth item, which assessed the influence of home characteristics on learner achievement, the study collected data on the source of light that the learner uses at home in doing his or her homework. This data was analysed and the results summarised in Figure 32.

Figure 32: Source of Lighting for Homework



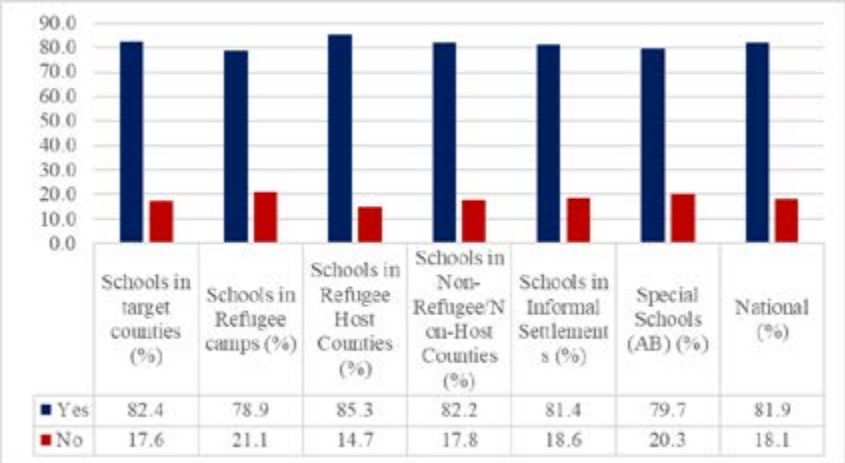
	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Paraffin lamp	10.9	6.3	9.2	11.8	11.4	14.4	10.9
Natural light	10.4	19.5	14.2	8.7	11.2	5.4	8.8
Electricity	33.9	25.0	32.1	35.2	50.8	59.5	42.4
Solar	26.1	14.8	18.8	28.7	11.4	13.5	21.8
Fire light	5.6	8.6	9.2	4.7	5.4	1.8	4.7
Torch	9.0	19.5	11.5	7.3	5.4	1.8	7.6
None	4.1	6.3	5.1	3.7	4.4	3.6	3.8

Figure 32 shows that 42.4% of learners nationally use electricity for lighting, while 21.8% rely on solar and 10.9% on paraffin lamps. Of importance to note, paraffin use is higher in special schools (14.4%), informal settlements (11.4%), and target counties (10.9%), while electricity access is lowest in refugee camps (25.0%). These disparities indicate a significant number of learners especially those from schools in resource limited counties using 'high carbon emission source of energy' thus posing a potential health risks to both the learners and other household members. Since home lighting

conditions influence learner performance (Hoang et al., 2022), expanding access to clean energy, as envisaged in the National Energy Policy (GoK, 2018), may improve study environments and learning outcomes.

Domestic Work Undertaken by Learners During School Term: Finally, the seventh item, which assessed the influence of home characteristics on learner achievement, learners were asked whether they were involved in any work at home during school days and the data was analysed and presented in Figure 33.

Figure 33: Domestic Work Undertaken by Learners During School Term



	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Yes	82.4	78.9	85.3	82.2	81.4	79.7	81.9
No	17.6	21.1	14.7	17.8	18.6	20.3	18.1

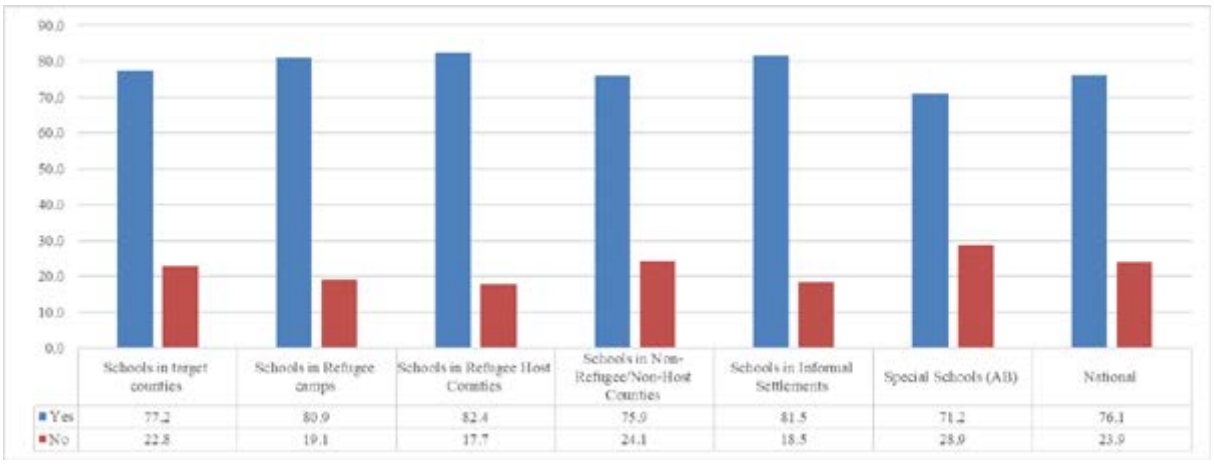
Figure 33 shows that nationally, 81.9% of learners engage in work at home, with the highest proportion observed in refugee host counties (85.3%), followed by target counties at 82.4%. These findings indicate substantial involvement of learners in some form of domestic work at home (either household chores or any other form of domestic work) across the different contexts in the study sites. Given that excessive domestic responsibilities reduce study time and negatively influence academic performance (Khan et al., 2019), addressing household workload may help enhance learners' concentration, retention, and overall educational outcomes.

4.2.3 Learner Contextual Factors at School

School characteristics influence learners' achievement by shaping the physical and emotional environment in which they grow. Factors such as distance to school, mode of travel, availability of accompaniment, attendance patterns, class repetition, enrolment, and dropout rates all affect academic participation and performance. These elements reflect the Basic Education Act (2013), which outlines standards for access, safety, infrastructure, and quality assurance, as well as the National Education Sector Strategic Plan (2023-2027), which emphasises equity, retention, and improved learning conditions. As Lone (2021) notes, the school environment significantly affects children's development. To understand how these conditions differ across various study school context data was analysed findings presented int the following figures and table.

Patterns of Learner Absenteeism: For the first item, which assessed the influence of school characteristics on learner achievement, the study collected data on learner's daily school attendance to establish patterns of learner absenteeism during the school term. This data was analysed, and results presented in Figure 34.

Figure 34: Learner Daily School Attendance Records

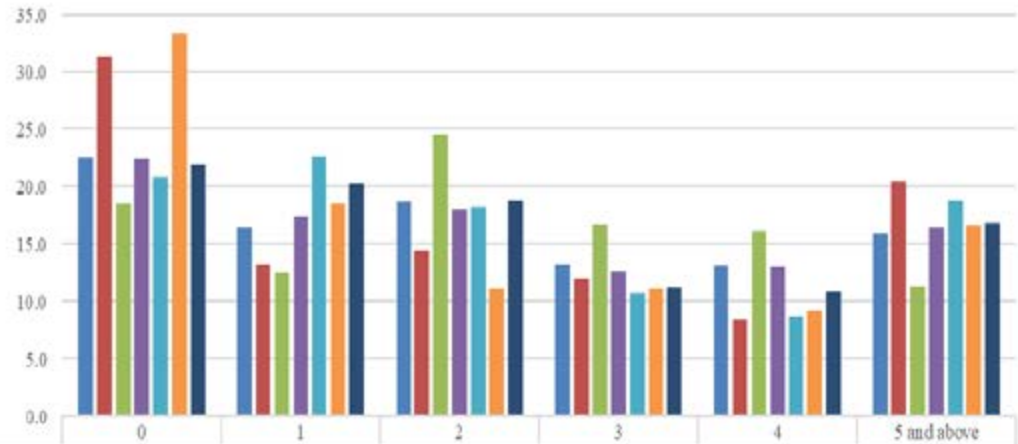


	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Yes	77.2	80.9	82.4	75.9	81.5	71.2	76.1
No	22.8	19.1	17.7	24.1	18.5	28.9	23.9

Figure 34 shows that on a national scale, 76.1% of students attend school every day, while 23.9% do not. This pattern is similar across various types of schools, although age-based special schools report the lowest daily attendance at 71.2%. These findings point to a notable level of absenteeism in different settings. Chronic absenteeism can put students at risk of falling behind academically (Bauer, 2019), and regular school attendance is crucial for developing academic skills, while inconsistent attendance can hinder learning (Alexander et al., 2001). Therefore, it's clear that improving attendance could lead to better performance, progression, and retention outcomes.

On the other hand, learners were asked to indicate the number of times they had missed school during the term and their responses analysed, and the results presented in Figure 35.

Figure 35: Number of Times Learner has Missed School



	0	1	2	3	4	5 and above
Schools in target counties	22.5	16.4	18.7	13.2	13.2	16.0
Schools in Refugee camps	31.3	13.3	14.5	12.1	8.4	20.5
Schools in Refugee Host Counties	18.6	12.6	24.6	16.8	16.2	11.4
Schools in Non-Refugee/Non-Host Counties	22.4	17.4	18.0	12.7	13.0	16.4
Schools in Informal Settlements	20.9	22.6	18.3	10.7	8.7	18.8
Special Schools (AB)	33.3	18.5	11.1	11.1	9.3	16.7
National	22.0	20.3	18.8	11.2	10.9	16.9

Figure 35 indicate that, on a national level, 22.0% of students didn't miss any school during the term, while 20.3% missed school once. However, absen-

teeism was notably higher in schools located in refugee camp (20.5%) and schools in informal settlement (18.8%), where students missed school five times or more each term. These findings highlight ongoing attendance issues in vulnerable settings. Frequent absenteeism can lead to a greater risk of falling behind academically and losing interest in school.

Learners who reported being absent were also asked to share their reasons, and the findings are illustrated in Table 23.

Table 23: Reasons for Missing School

Table 23 shows that illness was the leading reason for learners missing school, with 56.1% of learners reporting this nationally. Fear of punishment led to absenteeism for 5.1% of learners in special schools and 2.5% in informal settlements, hinting at the ongoing use of corporal or punitive discipline measures. Moreover, 3.9% of learners said they missed school because their parents assigned them some domestic work, with higher numbers reported in non-refugee schools in host counties (6.8%), refugee host counties (6.3%), and schools in refugee camps (5.1%). In addition, insights from discussions with parents also highlighted that insecurity significantly affects regular attendance, especially in nomadic communities.

Grade Repetition: The Basic Education Act, (2013) discourages class repetition, noting that it contributes to over-aged learners, a factor associated with adverse learning outcomes. To examine the extent to which this policy provision is reflected across the study sites, the study analysed data on whether learners had repeated any class. The results of this analysis are presented in Figure 36.

Figure 36: Grade Repetition

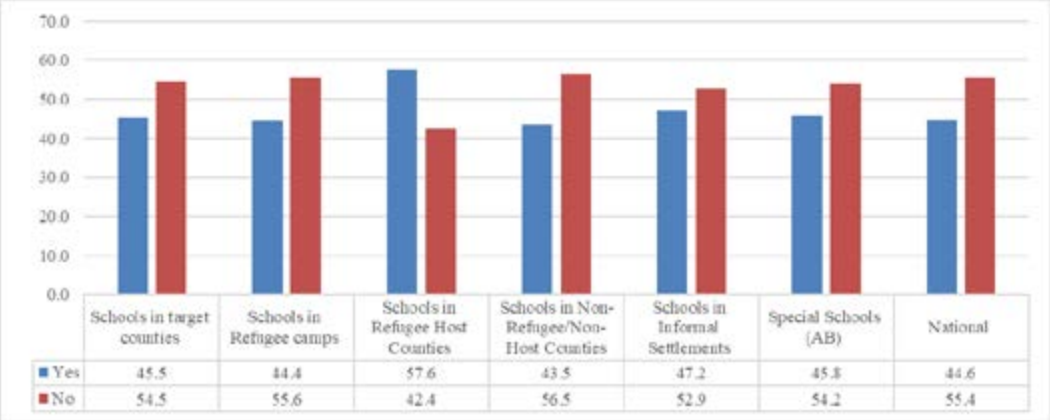


Figure 36 reveals that 44.6% of learners across the country reported having repeated a Grade. The highest rates of repetition were reported in schools located in refugee host counties at 57.6%, followed closely by schools in informal settlements at 47.2%, and schools in special schools (AB) at 45.8%. Slightly lower rates were reported in schools in target counties (45.5%) and those in refugee camps (44.4%).

The study also investigated why students are repeating Grades, and findings presented in Figure 37.

Figure 37: Reasons for Grade Repetition

Figure 37 reveals that 20.5% of students across the country had to repeat a grade because they were helping their parents with some work, with a significant number 42.9% of the cases reported in schools in refugee camps. Another significant factor was the lack of light at home, which affected 28.6% of

learners in schools in same refugee camps. Moreover, 38.5% of students from special schools mentioned other reasons that also require attention.

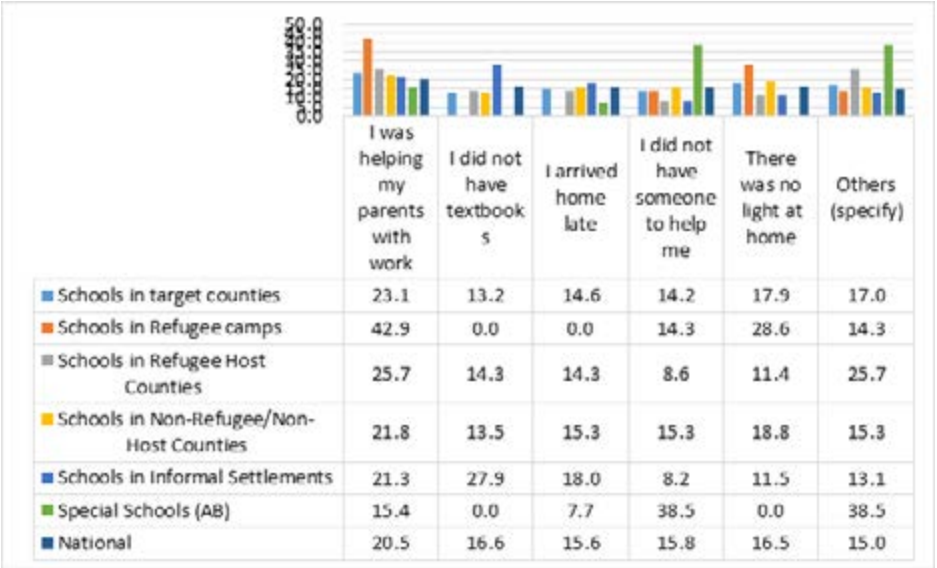
There's clear evidence that child labour and household poverty are closely linked to issues like repetition and dropout rates (UNESCO, 2022). Additionally, humanitarian crises only make educational inequalities worse (UNICEF, 2021). To tackle these challenges, policymakers may need to enhance social protection and improve access to energy. Schools should provide remedial support, and humanitarian organizations must bring together livelihoods, protection, and inclusive education initiatives.

Learner enrolment: The implementation of Free Primary Education (FPE) in Kenya seeks to promote equitable access and gender parity in enrolment. To examine the extent to which this policy objective is reflected across the study sites, the study analysed data on Grade 3 learner enrolment by gender in 2024. The results of this analysis are presented in Table 24.

Table 24: Gender Distribution of Grade Four Enrolment in 2024

School enrolment	Gender	Refugee	Target Counties	Refugee host	Non-refugee	Informal	SNE Age-based	National
Term 1	Boys	3,608	6,019	3,656	48	490	-	10,053
	Girls	2,668	4,635	2,696	28	924	-	9,946
	Total	6,276	11,899	7,393	1,117	1,968	-	23,964
Term 2	Boys	3,608	6,145	3,656	48	1,037	-	10,804
	Girls	2,668	4,736	2,696	28	941	-	10,521
	Total	6,276	12,126	7,393	1,117	1,978	-	23,636
Term 3	Boys	3,608	5,366	3,608	-	660	-	7,224
	Girls	2,668	3,964	2,668	-	555	-	6,418
	Total	6,276	9,319	6,276	-	1,208	-	14,164
Totals	Boys	1,710	6,745	2,250	540	1,044	-	13,118
	Girls	1,069	5,146	1,646	577	941	-	11,484
	Total	2,779	12,001	3,896	1,117	1,978	-	23,925

Table 24 shows a total national enrolment of 23,925 Grade 3 learners, comprising 13,118 boys and 11,484 girls. The highest enrolment was observed in schools in target counties, with 6,745 boys and 5,146 girls, while refugee camps reported slightly higher enrolment of girls (577) than boys (540). The enrolment indicates persistent gender disparities, with more boys being enrolled than girls, except in specific contexts like refugee camps. This pattern reflects broader barriers to girls' education



in low- and middle-income countries, where they are less likely to complete primary schooling despite global efforts toward gender parity. The findings underscore the need for targeted strategies to improve girls' enrolment and retention. Parents Focus Group discussions further highlighted that fostering diverse learner populations enhances collaboration, social cohesion, and national unity may reduce gender disparity among schools in different context.

Reported Learner Dropout Cases: Another variable which assessed the influence of school characteristics on learner achievement was reported cases of learner dropout. The study collected data from Heads of Institutions regarding the occurrence of learner dropout during the school term. This data was analysed, and the results are presented in Figure 38.

Figure 38: Reported Cases of Learner Drop Out

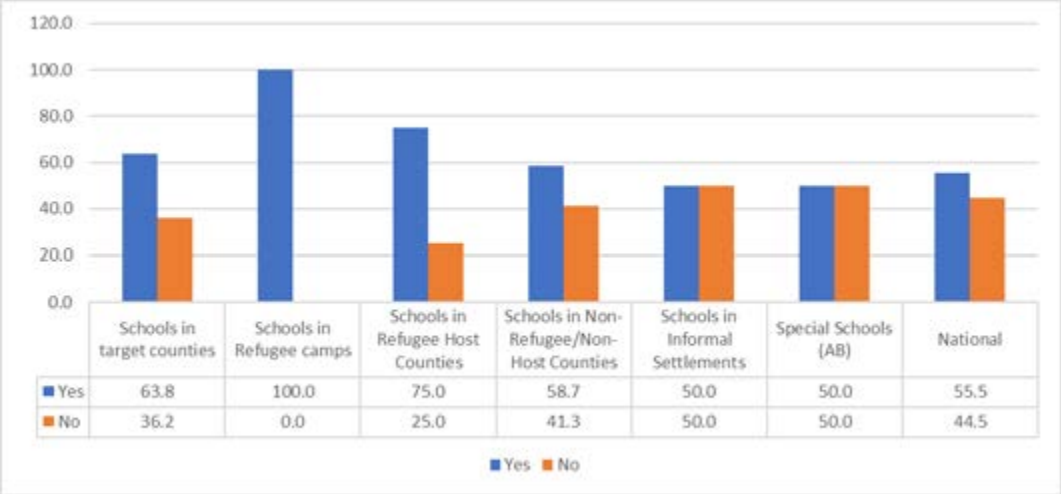


Figure 38 indicates that 55.5% of schools across the nation reported learner dropout. This issue is particularly pronounced in refugee camps, where every school is affected, and in host counties for refugees, where 75% of schools are facing similar challenges. These findings indicate substantial hurdles in maintaining consistent attendance, reflecting barriers such as poverty, insecurity, and socio-cultural pressures. The impact of dropouts is notable such that it not only diminishes the quality of education but also limit future opportunities, especially for girls who may be pushed into early marriages, perpetuating cycles of poverty and inequality (UNESCO, 2019). To address this, it's crucial to enhance retention strategies to ensure that every child's right to education, as enshrined in Kenya's Constitution (2010), is upheld.

To examine the extent at which learners were dropping out of school, the study analysed data on the number of learners who had dropped out of school per grade in 2024. The results of this analysis are presented in Table 25.

Table 25: Reported Cases of Learner Drop Out per Grade in 2024

Cases of learner drop-out	Gender	Refugee	Target Counties	Refugee host	Non-refugee	Informal	SNE Age-based	National
Grade 1	Boys	9	105	77	68	4	0	179
	Girls	6	67	54	48	2	2	121
	Total	15	172	131	116	6	2	300
Grade 2	Boys	7	62	45	38	4	0	134
	Girls	6	54	39	33	5	0	134
	Total	13	116	84	71	9	0	268

Cases of learner drop-out	Gender	Refu-gee	Target Counties	Refugee host	Non-refugee	Informal	SNE Age-based	National
Grade 3	Boys	9	42	27	18	5	1	117
	Girls	8	49	27	19	3	0	124
	Total	17	91	54	37	8	1	241
Grade 4	Boys	8	66	36	28	10	3	170
	Girls	7	41	28	21	7	0	128
	Total	15	107	64	49	17	3	298
Grade 5	Boys	9	68	37	28	12	0	174
	Girls	10	56	32	22	9	4	160
	Total	19	124	69	50	21	4	334
Grade 6	Boys	4	28	11	7	6	1	134
	Girls	6	26	13	7	8	1	137
	Total	10	54	24	14	14	2	271

Table 27 indicates that more boys (170) than girls (128) dropped out in Grade 4, highlighting gender disparity in retention. Early dropout contributes to cumulative learning loss and reduced completion rates. Heads of Institutions cited poverty, household responsibilities, and school-related challenges as leading causes of learners dropping out of school. The data on the reasons for learners dropping out of school as reported by Heads of Institutions were further analysed and results presented in Table 26.

Table 26: Factors Contributing to Learner Dropout.

Causes of learner drop-out	Schools in Refugee Camps	Schools in Target counties	Schools in Refu-gee Host Counties	Schools in Non-refugee/ Non-Host Counties	Schools in Informal Settlements	SNE Age-based	National
Poverty	0	10.1	3.8	4.8	17.6	26.1	12.7
Sickness of learn-er / parent	0	7.2	3.8	4.8	7.8	17.4	9
Domestic respon-sibilities	10	12.5	9.6	9.5	7.8	13	11.2
Child labour	0	6.7	5.8	7.1	7.8	4.3	6.7
Truancy	20	7.7	11.5	9.5	11.8	0	8.1
Low academic achievement	0	4.8	3.8	4.8	2	4.3	3.8
Early marriages	20	6.7	5.8	2.4	3.9	0	5
Alcohol, drug & substance abuse	0	2.4	3.8	4.8	5.9	0	3.5

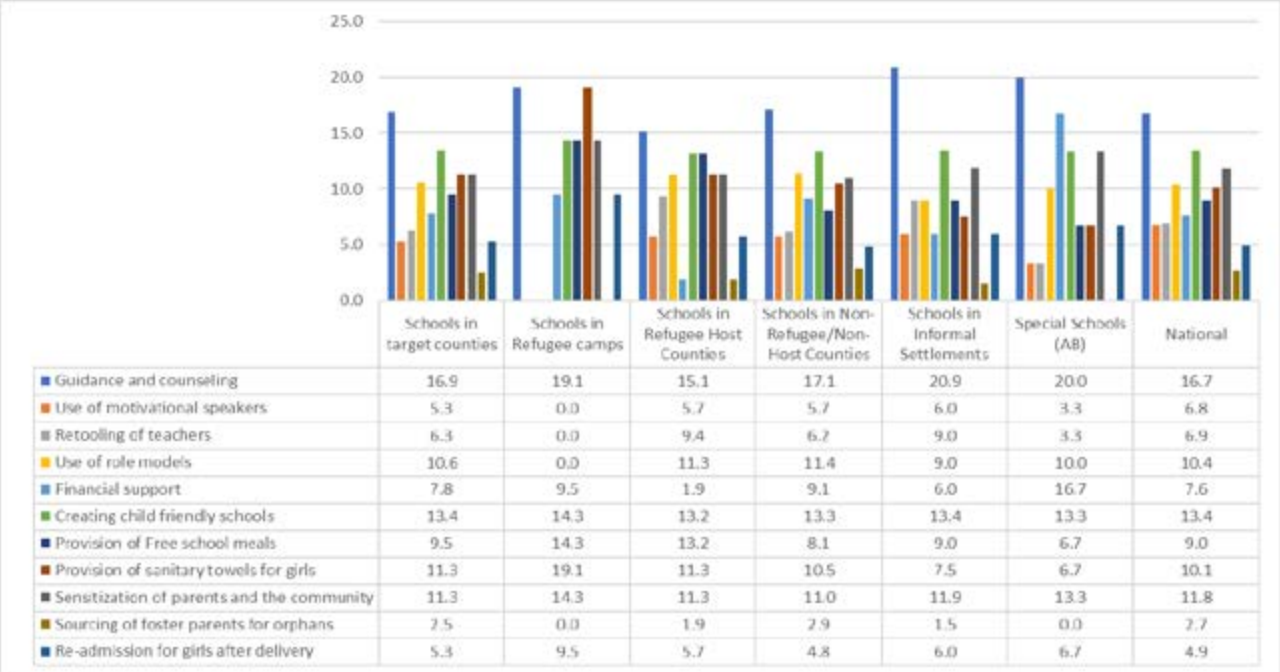
Pregnancy	10	5.3	1.9	0	7.8	0	5.3
Disability related challenges	0	1.4	0	0	0	17.4	1.8
Cultural / religious aspects	0	3.8	3.8	4.8	2	0	2.9
Causes of learner drop-out	**Schools in Refugee Camps**	**Schools in Target counties**	**Schools in Refu-gee Host Counties**	**Schools in Non-refugee/ Non-Host Counties**	**Schools in Informal Settlements**	**SNE Age-based**	**National**
Distance from school	0	3.8	3.8	4.8	7.8	13	4.8
Radicalization / extremism	0	0.5	1.9	2.4	0	0	0.7
Lack of sanitation towels (for girls)	10	3.4	7.7	7.1	2	0	3.6
Gender based violence	0	2.9	1.9	2.4	5.9	0	2.9
Loss of interest in learning	0	3.8	3.8	4.8	3.9	0	4.1
Loss of interest in learning	0	3.8	1.9	2.4	2	0	2.7
Natural calamities	0	2.4	3.8	4.8	0	4.3	3.1
Insecurity	0	1.4	1.9	2.4	2	0	1.8
Fear of punish-ment	0	1	1.9	2.4	0	0	1.1
Poor school infra-structure	0	0.5	1.9	2.4	0	0	1.4
Nomadic migra-tion	0	5.8	7.7	9.5	0	0	2.7
Refugee reloca-tion	30	1.9	7.7	2.4	2	0	1.1

Table 26 shows poverty as the main dropout cause, affecting 12.7% nationally, 26.1% in special schools,

and 17.6% in informal settlements. In schools in refugee camps, relocation (30%), truancy (20%), and early marriage (20%) were predominant. These findings reflect how deprivation, mobility, and harmful social norms undermine retention among vulnerable learners. Evidence links economic hardship and disengagement to higher dropout risk (UNESCO, 2022), while household vulnerability further weakens continuity (UNICEF, 2021). Expanding social protection, strengthening school tracking systems, and addressing early marriage through community engagement are critical.

To find out the measures taken by Heads of Institutions to reduce learners dropping out of school, the study analysed data on measures taken by Heads of Institutions to cab school dropout and the findings are presented in Figure 39.

Figure 39: Measures Taken to Reduce Learner Drop out Cases



	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Guidance and counseling	16.9	19.1	15.1	17.1	20.9	20.0	16.7
Use of motivational speakers	5.3	0.0	5.7	5.7	6.0	3.3	6.8
Retooling of teachers	6.3	0.0	9.4	6.2	9.0	3.3	6.9
Use of role models	10.6	0.0	11.3	11.4	9.0	10.0	10.4
Financial support	7.8	9.5	1.9	9.1	6.0	16.7	7.6
Creating child friendly schools	13.4	14.3	13.2	13.3	13.4	13.3	13.4
Provision of Free school meals	9.5	14.3	13.2	8.1	9.0	6.7	9.0
Provision of sanitary towels for girls	11.3	19.1	11.3	10.5	7.5	6.7	10.1
Sensitization of parents and the community	11.3	14.3	11.3	11.0	11.9	13.3	11.8
Sourcing of foster parents for orphans	2.5	0.0	1.9	2.9	1.5	0.0	2.7
Re-admission for girls after delivery	5.3	9.5	5.7	4.8	6.0	6.7	4.9

Figure 39 indicates that 16.7% of schools recommended guidance and counselling to reduce dropouts, followed by creating child friendly schools at 13.4 %, parent and community sensitization (11.8%), role models (10.4%), and provision of sanitary towels for girls (10.1%). Fewer schools proposed fostering orphans (2.7%) or readmitting girls after delivery (4.9%), suggesting limited emphasis on highly vulnerable groups. These patterns reflect a preference for preventive, school-based strategies over targeted reintegration measures. Parental FGDs further underscored life skills education as critical for informed decision-making. Evidence affirms that counselling and life skills strengthen resilience and retention (UNESCO, 2022). Stakeholders should combine universal prevention with tailored support for at-risk learners.

Duration of Study at Foundation Level for stage-based learners: The stage-based curriculum emphasizes level progression based on learners' mastery of required competencies. To assess how this competency-based approach influences time spent in early learning, the study analysed on the number of years learners remained at the Foundation Level. The findings were analysed and results presented in Table 27.

Table 27: Duration in Foundation Level

Duration in Foundation level	Percentage
1 year and below	7.1%
2 years	3.6%
3 years	50.0%
4 years	14.3%
More than 4 years	25.0%

Table 27 shows that 50% of learners in the Stage-Based pathway spent three years at the Foundation Level, while 25% remained for more than four years. This indicates that most learners require three years or longer to complete this stage. The extended duration reflects differences in competency acquisition and readiness for progression, underscoring the importance of flexible pacing in early education (Wawire et al., 2025). For policymakers, these findings highlight the need to align resources and teacher support with expected learning timelines. Schools should implement targeted interventions for learners yet to attain expected competencies despite prolonged enrolment, while parents and communities can reinforce learning continuity at home.

Grooming Activities for stage-based learners: At the Foundation Level, learners are expected to acquire basic grooming skills. To assess how effectively these competencies are practiced daily, the study analysed data on learners' engagement in basic grooming activities and the findings are presented in Table 28.

Table 28: Daily Grooming Activities Performed by Stage-Based Learners

Activities	Percentage
Cleaning their body	25.3%
Brushing their teeth	27.7%
Combing their hair	25.3%
Brushing their shoes	21.7%

From Table 30 the study has shown that only about a quarter of Stage-Based learners independently perform daily grooming activities, including cleaning their body (25.3%), brushing teeth (27.7%), combing hair (25.3%), and brushing shoes (21.7%), leaving about 75% needing assistance. This highlights gaps in functional independence, which can affect readiness for higher levels (Njeru et al, 2024). Policymakers, schools, and parents should strengthen life skills training, structured routines, and home support to build learner's autonomy.

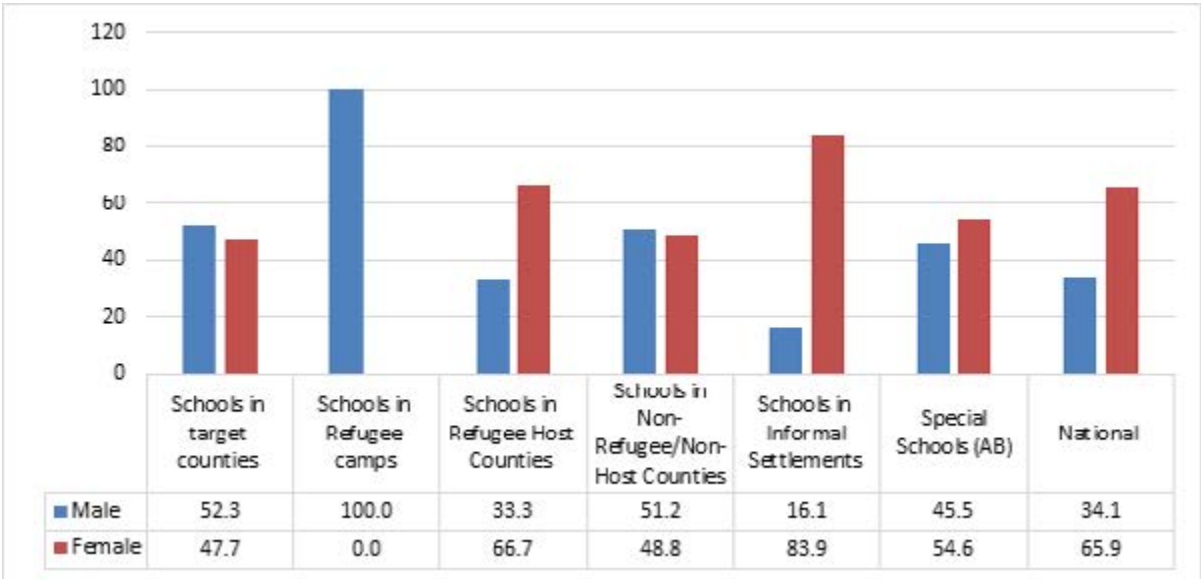
4.3 Teacher Demographics and Contextual Factors

Teacher characteristics significantly influence student learning by shaping teaching quality and classroom dynamics. Attributes such as gender, qualifications, training, subject knowledge, and experience impact learner performance (Ankomah et al., 2005; Myers et al., 2016; Opper, 2019). This aligns with the Basic Education Act 2013 (GoK, 2013) and the National Education Sector Strategic Plan 2023-2027 (MoE, 2024), which emphasise teacher competency, professional development, and quality assurance. Data from sampled schools were analysed, with findings presented in Figure 40.

4.3.1 Gender Distribution of Grade 3 Teachers

To examine how teachers' gender affected learners' achievement, the study collected data across different school context regarding teachers' gender and data was analysed, summarised and presented in Figure 40.

Figure 40: Gender Distribution 3 Teachers



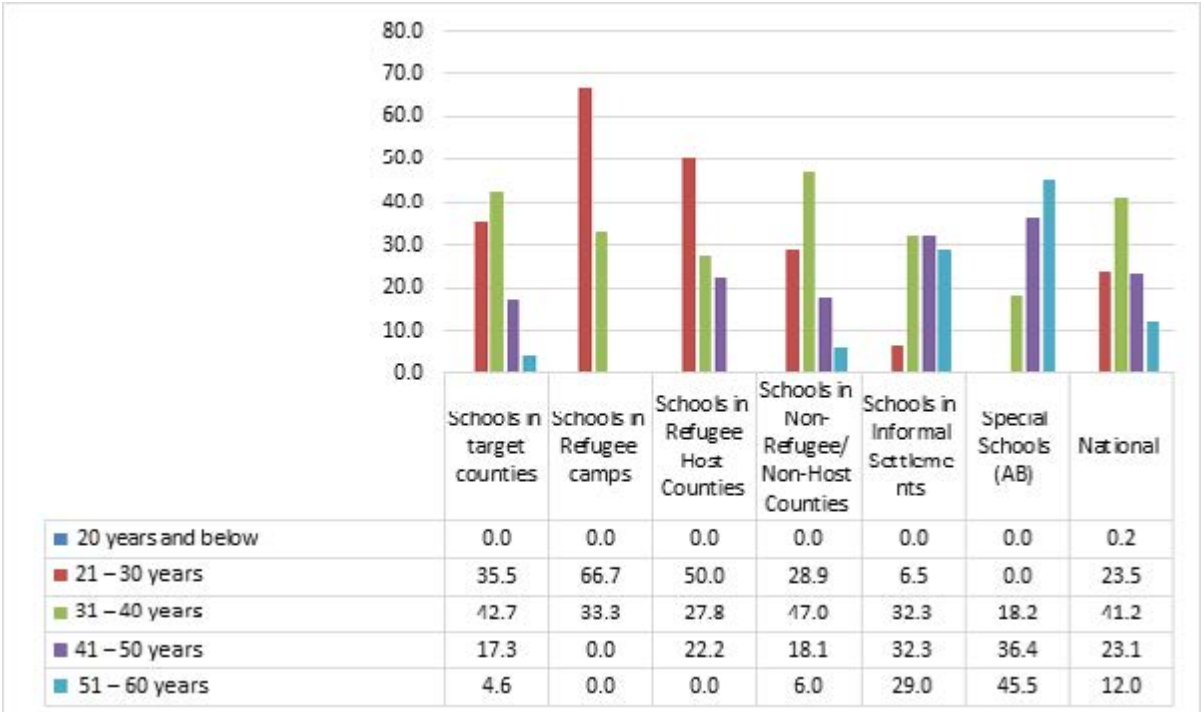
	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Male	52.3	100.0	33.3	51.2	16.1	45.5	34.1
Female	47.7	0.0	66.7	48.8	83.9	54.6	65.9

Figure 40 shows that nationally, 65.9% of Grade 3 teachers are female, with 66.7% in schools in refugee host counties and 83.9% in informal settlements. In contrast, all teachers in refugee camps are male, indicating a stark gender imbalance. These patterns suggest that gender representation in teaching varies widely across different contexts, potentially affecting classroom dynamics, student engagement, and role modelling (Glock et al., 2024). For policymakers, targeted recruitment and retention of female teachers in refugee camps schools is essential, alongside professional development and safety measures. Schools and humanitarian agencies should implement gender-sensitive staffing policies, while communities can support inclusive learning environments that reflect diverse role models and promote equitable educational outcomes.

4.3.2 Age Distribution of Grade 3 Teachers

To assess whether teacher characteristics impacted on learner's achievement, the study collected data across different school context and data was analysed, summarised and presented in Figure 41.

Figure 41: Teachers' Age Bracket



	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/ Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
20 years and below	0.0	0.0	0.0	0.0	0.0	0.0	0.2
21 – 30 years	35.5	66.7	50.0	28.9	6.5	0.0	23.5
31 – 40 years	42.7	33.3	27.8	47.0	32.3	18.2	41.2
41 – 50 years	17.3	0.0	22.2	18.1	32.3	36.4	23.1
51 – 60 years	4.6	0.0	0.0	6.0	29.0	45.5	12.0

Figure 41 shows that nationally, most Grade 3 teachers are aged 31 to 40 years (41.2%), followed by 21 to 30 years (23.5%), 41 to 50 years (23.1%), and those aged 51 to 60 years (12.0%). In refugee camps, all teachers are under 40, with 66.7% aged 21–30 years, while refugee host communities and target counties also have most younger teachers, reflecting temporary postings and new opportunities in hardship areas. Conversely, 81.9% of teachers in age-based special schools are over 40, with 45.5% above 50, indicating a looming need for succession planning. Age distribution affects experience, mentorship, and continuity, necessitating targeted recruitment, professional development, and long-term workforce planning (Ngware et al., 2019).

4.3.3 Teacher Disability and Support Services

This study sought to examine whether teacher disabilities and access or not access to disability support service influence learners' achievements. Data was collected across different school context analysed, and the results summarized and presented in Figure 42.

Figure 42: Teachers with Disabilities

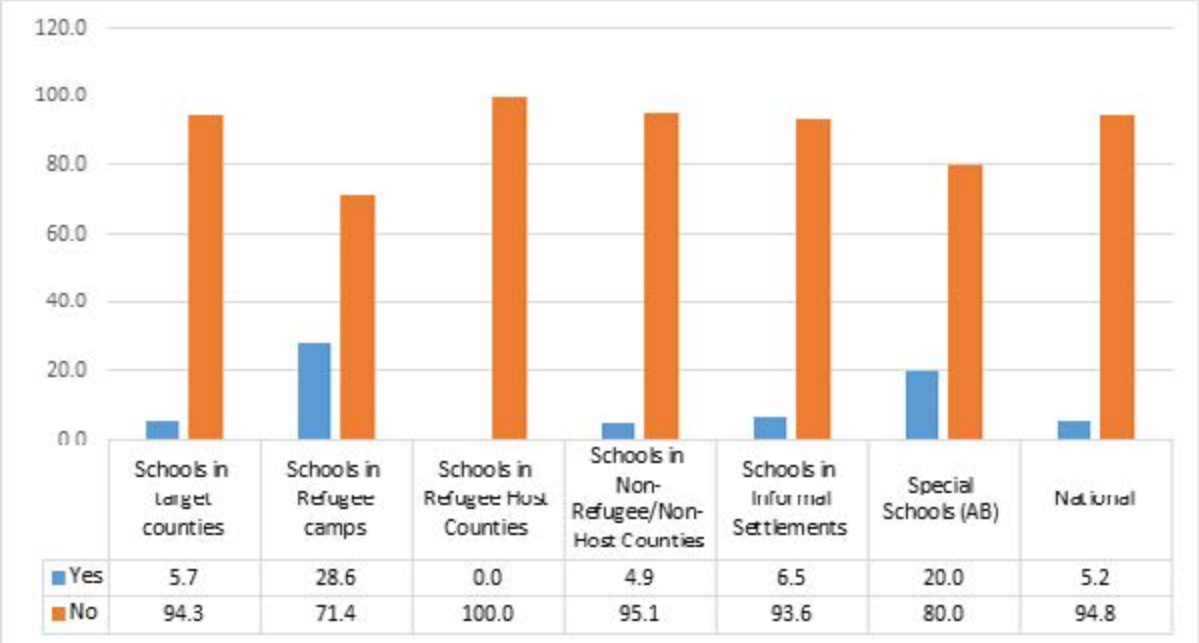
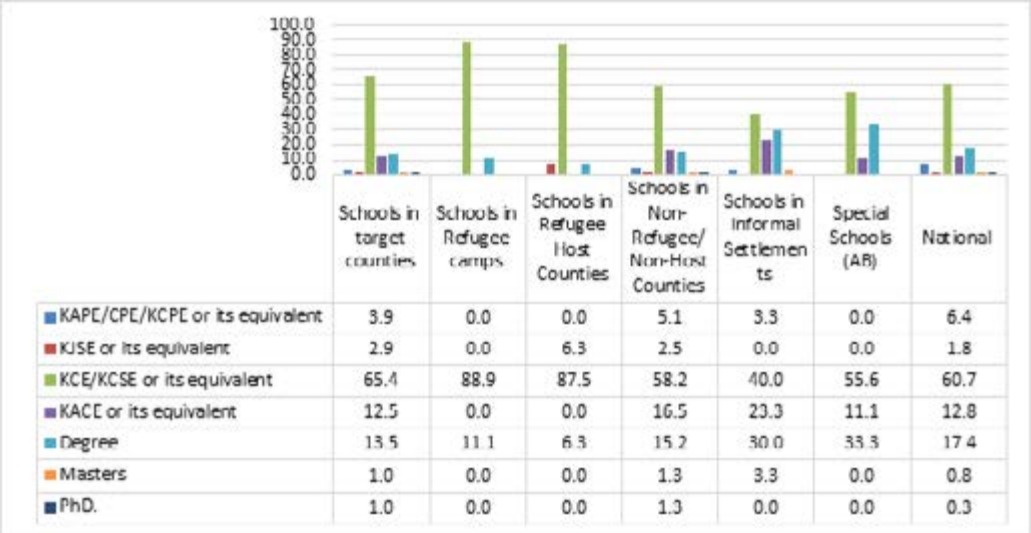


Figure 42 shows that nationally, 5.2% of teachers reported living with a disability, with similar rates in target counties (5.7%), non-refugee/non-host counties (4.9%), and informal settlements (6.5%). Higher rates were observed in refugee camps (28.6%) and special schools (20.0%), while no teacher in refugee host counties reported disabilities. This finding highlights the need for targeted support and inclusive policies.

4.3.4 Academic Qualifications of Teachers.

This study sort to assess how teachers' academic qualification influenced learners' achievements and data from different school context were analysed, with the results summarised and presented in Figure 43.

Figure 43: Highest Academic Qualifications of Grade Three Teachers



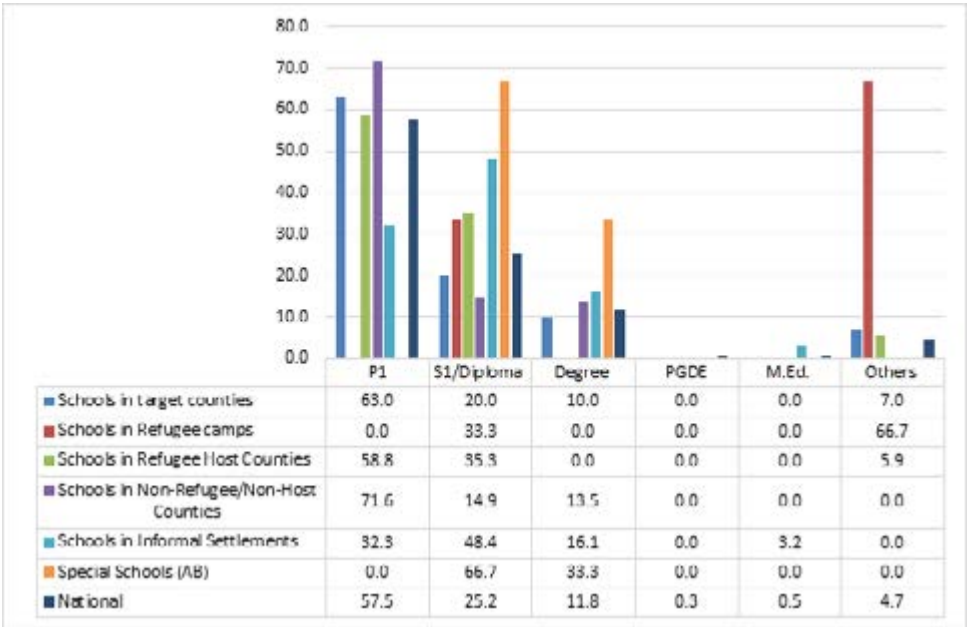
	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/ Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
KAPE/CPE/KCPE or its equivalent	3.9	0.0	0.0	5.1	3.3	0.0	6.4
KJSE or its equivalent	2.9	0.0	6.3	2.5	0.0	0.0	1.8
KCE/KCSE or its equivalent	65.4	88.9	87.5	58.2	40.0	55.6	60.7
KACE or its equivalent	12.5	0.0	0.0	16.5	23.3	11.1	12.8
Degree	13.5	11.1	6.3	15.2	30.0	33.3	17.4
Masters	1.0	0.0	0.0	1.3	3.3	0.0	0.8
PhD.	1.0	0.0	0.0	1.3	0.0	0.0	0.3

Figure 43 shows nationally, most Grade 3 teachers (60.7%) hold KCE/KCSE or equivalent, with 17.4% holding degrees and 12.8% KACE qualifications. Refugee camps and host counties report the highest proportion of teachers with only KCE/KCSE (88.9%), while special schools have the most degree holders (33.3%). A small proportion of teachers in schools in non-host counties (5.1%), target counties (3.9%), and informal settlements (3.3%) have only KAPE/CPE/KCPE. These results suggest that while most teachers meet minimum qualifications, gaps still remain in advanced credentials, which are linked to improved student outcomes, particularly in STEM subjects (Rice, 2003). Policymakers should promote in-service training and scholarships, schools can support professional development, and education managers should monitor qualification standards to enhance teaching quality.

4.3.5 Teacher professional qualifications

This study examined the influence of teacher qualifications on learner achievement. Data on teachers' professional training were collected and analysed, with findings presented in Figure 44. The analysis was structured to align with Kenya's Competency Based Education and the Competency Based Curriculum, emphasizing the importance of appropriate training for effective, learner-centred instruction.

Figure 44: Teacher Professional Qualification



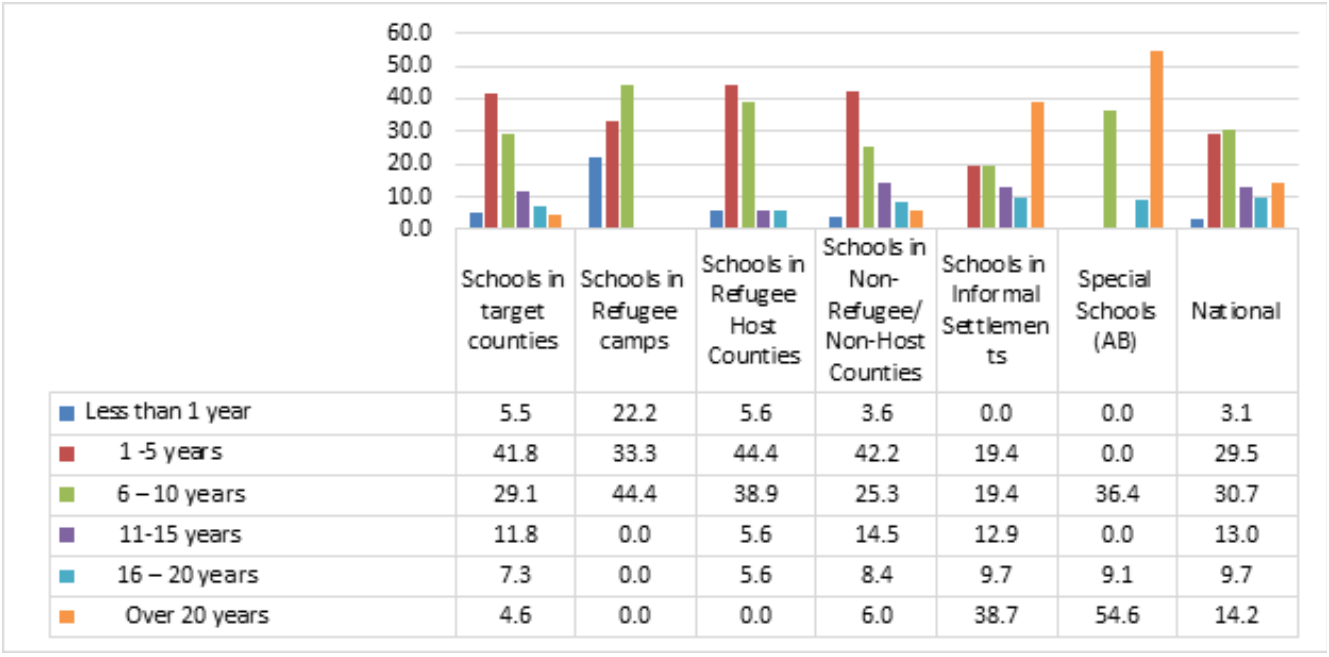
	P1	S1/Diploma	Degree	PGDE	M.Ed.	Others
Schools in target counties	63.0	20.0	10.0	0.0	0.0	7.0
Schools in Refugee camps	0.0	33.3	0.0	0.0	0.0	66.7
Schools in Refugee Host Counties	58.8	35.3	0.0	0.0	0.0	5.9
Schools in Non-Refugee/Non-Host Counties	71.6	14.9	13.5	0.0	0.0	0.0
Schools in Informal Settlements	32.3	48.4	16.1	0.0	3.2	0.0
Special Schools (AB)	0.0	66.7	33.3	0.0	0.0	0.0
National	57.5	25.2	11.8	0.3	0.5	4.7

Figure 44 shows that nationally, most Grade 3 teachers (57.5%) hold P1 as their highest professional qualification. Schools in non-host counties report the highest proportion (71.6%) of P1 holders, while schools in target counties have a mix of P1 (63.0%) and S1/Diploma holders (20.0%). Special schools have higher proportions of S1/Diploma (66.7%) and degree holders (33.3%). These results indicate that while many teachers are advancing their studies, most meet the minimum professional requirements, with targeted staffing in special schools to support diverse learners. Teacher professional qualifications are critical for effective Competency Based Education (CBE) implementation and addressing varied learning needs (Leibur et al., 2021; Ngeno, 2023). Policymakers should strengthen professional development programs, school managers should monitor skill alignment with CBC, and communities can support teacher upskilling initiatives to improve learning outcomes.

4.3.6 Teaching Experience of Grade 3 teachers

The study sort to assess the influence of teachers' teaching experience on teaching effectiveness, by analysing the number of years grade three had been teaching. This information was analysed, and the results are summarized in a bar graph presented in Figure 45.

Figure 45: Overall Teaching Experience of Teachers

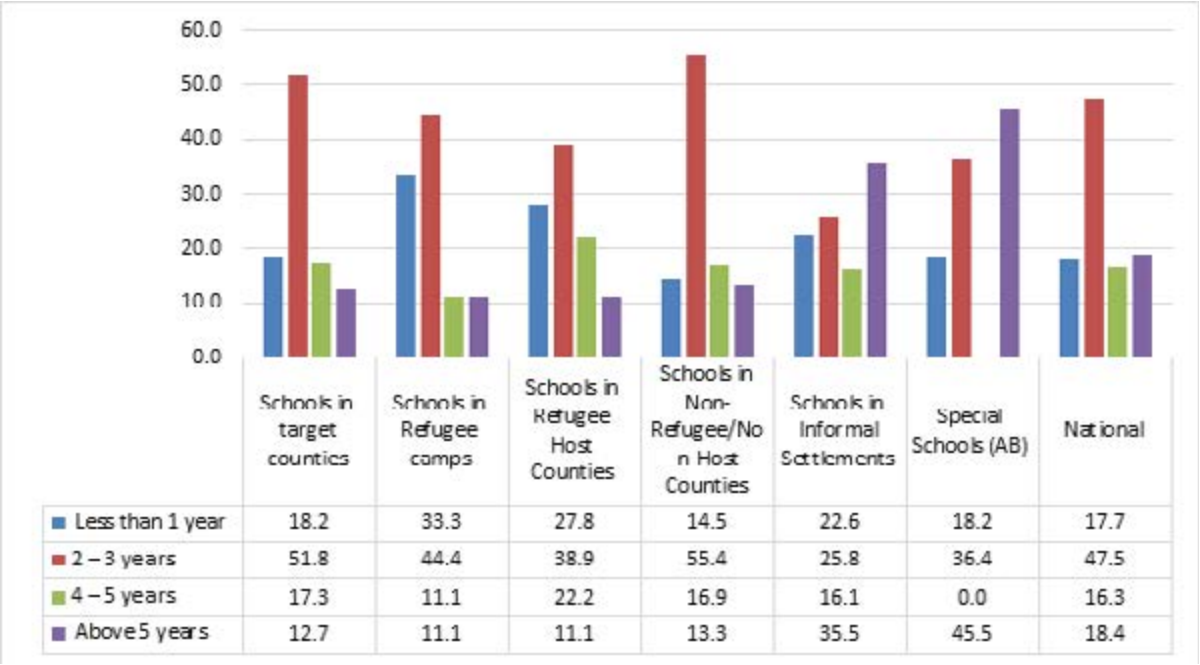


	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/ Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Less than 1 year	5.5	22.2	5.6	3.6	0.0	0.0	3.1
1 -5 years	41.8	33.3	44.4	42.2	19.4	0.0	29.5
6 – 10 years	29.1	44.4	38.9	25.3	19.4	36.4	30.7
11-15 years	11.8	0.0	5.6	14.5	12.9	0.0	13.0
16 – 20 years	7.3	0.0	5.6	8.4	9.7	9.1	9.7
Over 20 years	4.6	0.0	0.0	6.0	38.7	54.6	14.2

Figure 45 indicates that the largest proportion of teachers nationally (30.7%) have 6–10 years of teaching experience, followed by 29.5% with 1–5 years. Schools in refugee host counties (44.4%) and non-refugee/non-host counties (42.2%) show a concentration of less experienced teachers, while special schools (54.6%) and informal settlements (38.7%) report higher proportions of teachers with over 20 years' experience. Evidence suggests that greater teaching experience enhances instructional quality and student achievement (Kini & Podolsky, 2019; Podolsky et al., 2019). Policymakers and school leaders should strengthen mentorship, equitable teacher deployment, and retention strategies to optimize learning outcomes.

In addition, teachers were also asked their cumulative years of teaching since they started teaching as a Grade 3, teacher and the results were analysed and presented in Figure 46.

Figure 46: Experience Teaching in Grade 3



	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Less than 1 year	18.2	33.3	27.8	14.5	22.6	18.2	17.7
2 – 3 years	51.8	44.4	38.9	55.4	25.8	36.4	47.5
4 – 5 years	17.3	11.1	22.2	16.9	16.1	0.0	16.3
Above 5 years	12.7	11.1	11.1	13.3	35.5	45.5	18.4

Figure 46 shows that 47.5% of teachers nationally have 2–3 years of Grade 3 teaching experience, with similar trends across contexts. This suggests moderate classroom familiarity at this level. Experience enhances instructional effectiveness and learner outcomes (Kini & Podolsky, 2019). School leaders should prioritise retention and targeted professional development to strengthen early-grade learning quality.

4.3.7 Professional Registration of Teachers

In Kenya, the Teachers Service Commission (TSC) is legally mandated to register all qualified teachers, as outlined in the Constitution 2010 (RoK, 2010), the TSC Act 2012 (GoK, 2012), and the TSC Code of Regulations (2015). Registration is required for anyone teaching in public or private basic education institutions. Teachers were asked to report their TSC registration status, with results presented in Figure 47.

Figure 47: Teacher Registration Status with TSC

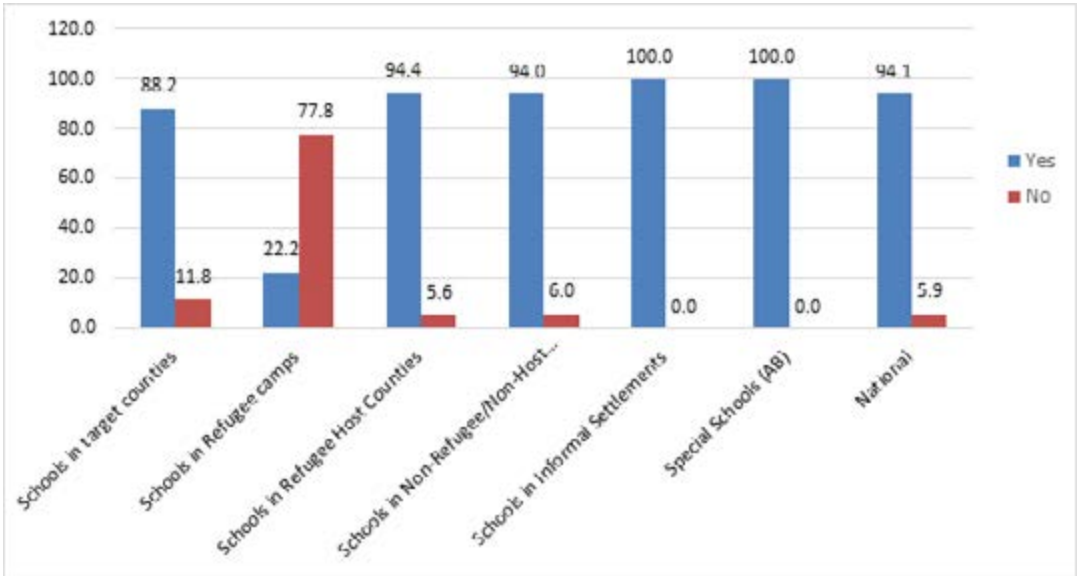


Figure 47 shows that nationally, 94.1% of teachers are registered with TSC, while 5.9% are not. All teachers in informal settlements and special schools are registered with TSC. In contrast, only 22.2% of teachers in refugee camps are registered, compared to 88.2% in target counties and 94.4% in schools in

refugee host counties.

4.3.8 Teacher Employer

Teacher recruitment and management in Kenya are guided by legal and policy frameworks. The Teachers Service Commission, under the Teachers Service Commission Act2012 (GoK, 2012), oversees registration, recruitment, and deployment, while the Basic Education Act 2013 (GoK, 2013) defines governance roles, including Boards of Management. Sessional Paper No. 1 of 2019 (GoK, 2019) aligns teacher management with reforms. The study analysed teacher employing authorities across school contexts, with results presented in Figure 48.

Figure 48: Grade 3 Teacher Employer

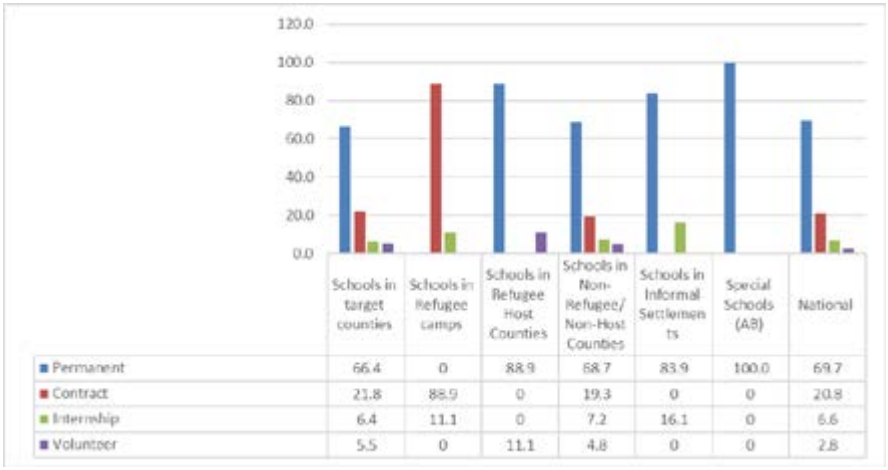


Figure 48 shows that 73.0% of teachers nationally are employed by the Teachers Service Commission, 19.7% by Boards of Management, and 7.4% by NGOs or sponsors. All teachers in special schools and informal settlements are TSC-employed, while BoM employment is higher in schools in target and non-refugee counties. TSC employment offers greater job security and retention, whereas BoM contracts may involve lower pay and instability. These disparities may affect motivation, turnover, and instructional consistency. Policymakers and school leaders should address staffing inequities to enhance stability, teacher morale, and learner outcomes.

4.3.9 Terms of Employment for Grade 3 Teachers

To assess the influence of teachers' employment terms on teaching effectiveness, the study collected data on teachers' contract type and job satisfaction. This information was analysed to determine how employment stability may affect instructional continuity and learner outcomes, and the results are summarised in Figure 49.

Figure 49: Teacher Terms of Employment

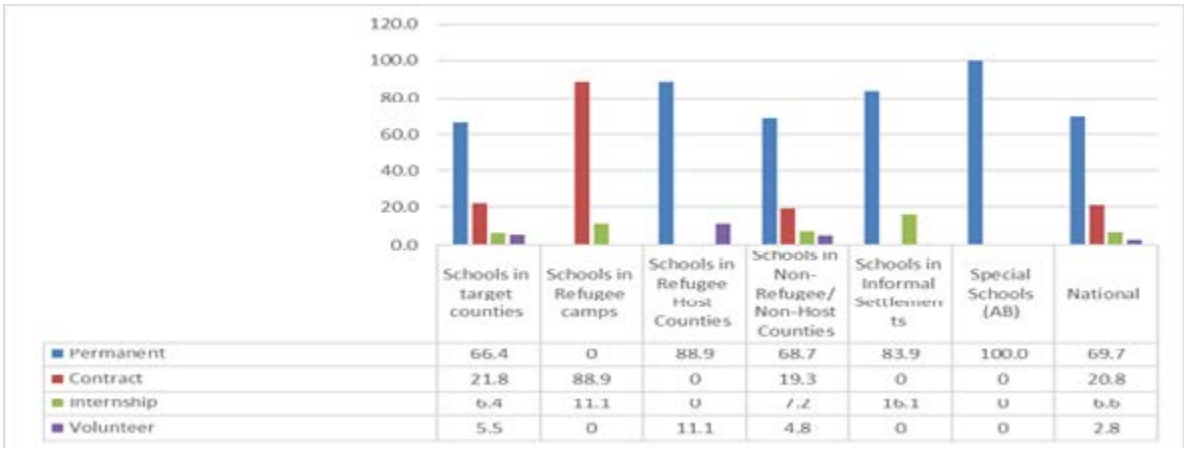


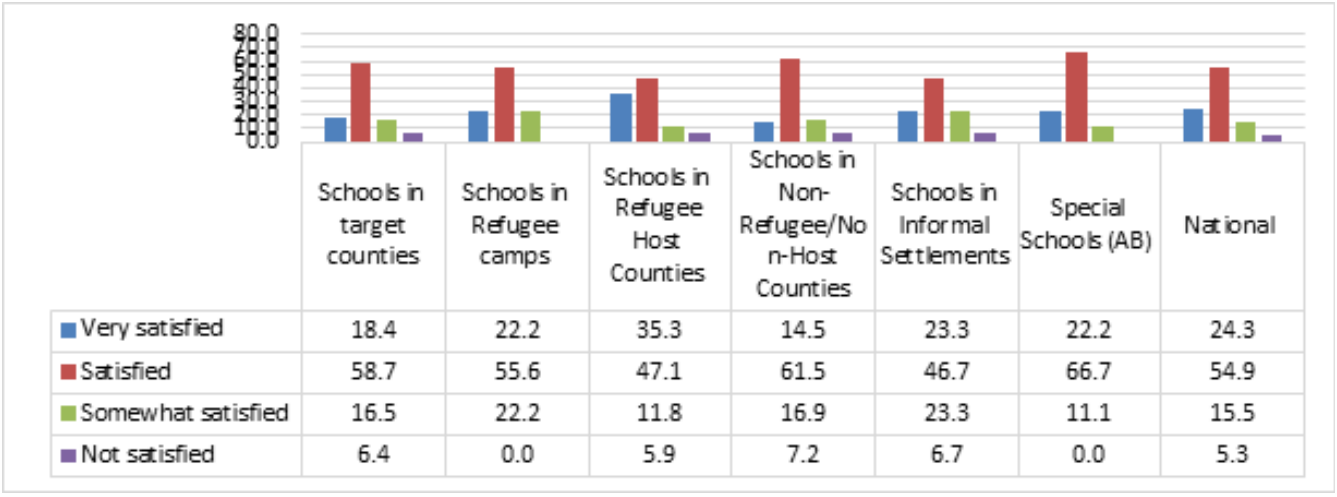
Figure 49 shows that 69.7% of teachers nationally hold permanent positions, though refugee camps

rely heavily on contract teachers (88.9%) and some volunteers. Stable employment enhances motivation and instructional continuity (Ingersoll, 2001). The Teachers Service Commission and partners should strengthen equitable staffing and contract regularisation.

4.3.10 Job Satisfaction of Grade 3 teachers

To assess the influence of teacher's level of satisfaction on learner achievements, teachers were asked to indicate their level of job satisfaction in their day-to-day work, and they were summarised and presented in Figure 50.

Figure 50: Level of Job Satisfaction



	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Very satisfied	18.4	22.2	35.3	14.5	23.3	22.2	24.3
Satisfied	58.7	55.6	47.1	61.5	46.7	66.7	54.9
Somewhat satisfied	16.5	22.2	11.8	16.9	23.3	11.1	15.5
Not satisfied	6.4	0.0	5.9	7.2	6.7	0.0	5.3

Figure 50 shows 79.2% of teachers reported being *satisfied* or *very satisfied* with their jobs, 15.5% were *somewhat satisfied*, and 5.3% *not satisfied.* Satisfaction was highest in refugee host counties (35.3%) and informal settlements (23.3%). The highest dissatisfaction was reported in informal settlements (6.7%) and target counties (6.4%). Research shows that teacher job satisfaction positively influences student performance through increased motivation and better classroom environments (Judge, 2001; Lee, 2010; Rigopoulou, 2011; Lopes &Oliveira, 2020; Asif et al., 2016).

The TALIS, (2024) recommends that education systems may need to address workload pressures and strengthen supportive school leadership to sustain high levels of teacher satisfaction. It further emphasizes structured mentoring and improved working conditions as key strategies for enhancing teacher well-being and retention.

Teachers were asked to indicate the factors contributing to job dissatisfaction and the results presented in Table 29.

Table 29: Factors Contributing to Teacher Job Dissatisfaction

Factor	Rating	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Stagnation at one job group	Large extent	8.5	5.2	11.1	8.3	10.4	11.1	8.4
	Not at all	0.7	2.6	0.0	0.6	0.0	0.0	0.7
	Some extent	2.2	3.9	0.0	2.4	0.7	0.0	2.2

Factor	Rating	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Length of stay at one station	Large extent	3.6	1.3	3.3	3.9	5.0	1.2	3.1
	Not at all	2.1	0.0	1.3	2.4	4.3	4.9	2.4
	Some extent	5.5	9.1	6.5	4.9	1.8	4.9	5.5
Working far from home	Large extent	6.6	5.2	9.2	6.2	5.7	3.7	6.4
	Not at all	1.5	2.6	0.0	1.7	1.1	0.0	1.5
	Some extent	3.0	3.9	2.0	3.2	4.3	7.4	3.3
Class Size	Large extent	4.2	3.9	4.6	4.2	8.2	7.4	4.9
	Not at all	1.3	2.6	0.7	1.3	0.7	0.0	1.7
	Some extent	5.6	5.2	5.9	5.6	2.2	3.7	4.6
Heavy workload (lessons)	Large extent	6.0	6.5	5.9	6.0	8.2	8.6	6.4
	Not at all	1.3	1.3	0.0	1.6	0.7	1.2	1.2
	Some extent	3.7	2.6	5.2	3.4	2.2	1.2	3.6
Harsh working environment	Large extent	6.8	5.2	9.2	6.4	7.9	6.2	6.6
	Not at all	2.1	2.6	0.7	2.3	0.7	2.5	1.9
	Some extent	2.4	3.9	1.3	2.4	2.5	2.5	2.6
Poor and inadequate infrastructure	Large extent	5.9	5.2	8.5	5.4	5.7	6.2	5.9
	Not at all	1.4	2.6	0.7	1.4	1.1	0.0	1.7
	Some extent	3.9	3.9	2.0	4.3	4.3	4.9	3.6
Leadership style	Large extent	4.5	6.5	3.9	4.4	6.5	2.5	4.7
	Not at all	1.8	1.3	0.7	2.2	1.8	0.0	2.0
	Some extent	4.6	2.6	6.5	4.4	2.9	8.6	4.4
Remuneration	Large extent	4.3	2.6	7.8	3.7	6.5	4.9	4.6
	Not at all	0.9	2.6	0.0	0.9	0.4	0.0	1.1
	Some extent	5.9	5.2	3.3	6.6	4.3	6.2	5.2

Table 29 shows that stagnation in one job group is the main factor contributing to job dissatisfaction for the majority of teachers nationally (8.4%), as well as teachers in refugee camps and special schools (11.1%). Wolomasi et al. (2019), Činčera et al. (2019) and Rasto & Maulani (2019) in their studies link teacher job satisfaction to improved learning outcomes, with the studies highlighting its importance in enhancing teacher performance and self-efficacy.

CHAPTER FIVE 5

IMPLEMENTATION OF COMPETENCY-BASED CURRICULUM AND COMPETENCY BASED ASSESSMENT

5.1 Introduction

This chapter presents the findings in relation to the status of Competency Based Curriculum (CBC) and Competency Based Assessment (CBA) implementation, emphasizing how they have contributed to the attainment of educational outcomes. The chapter reflects on the progress made toward promoting equitable learning opportunities across gender, geographical regions, and marginalized populations.

The findings are organized under the following thematic areas: Teacher preparedness and their role in CBC and CBA implementation; Effectiveness of lesson delivery; Competency Based Assessment; Parental Empowerment and Engagement and Core values, Pertinent and Contemporary Issues (PCIs) and Education for Sustainable Development (ESD).

5.2 Teacher Preparedness and their Role in CBC and CBA Implementation

5.2.1 Teacher training on CBC and CBA and its effectiveness

Training on CBC and CBA equips teachers with the knowledge and skills required to effectively implement learner centered pedagogy and competency-based assessment practices. It ensures accurate implementation of the curriculum and evaluation of learners' progress. Given the significance of teacher preparedness in CBC and CBA, headteachers were asked to indicate whether teachers from their schools had undergone training in CBC and CBA. The findings are presented in Figure 51.

Figure 51: Training of Teachers in CBC and CBA

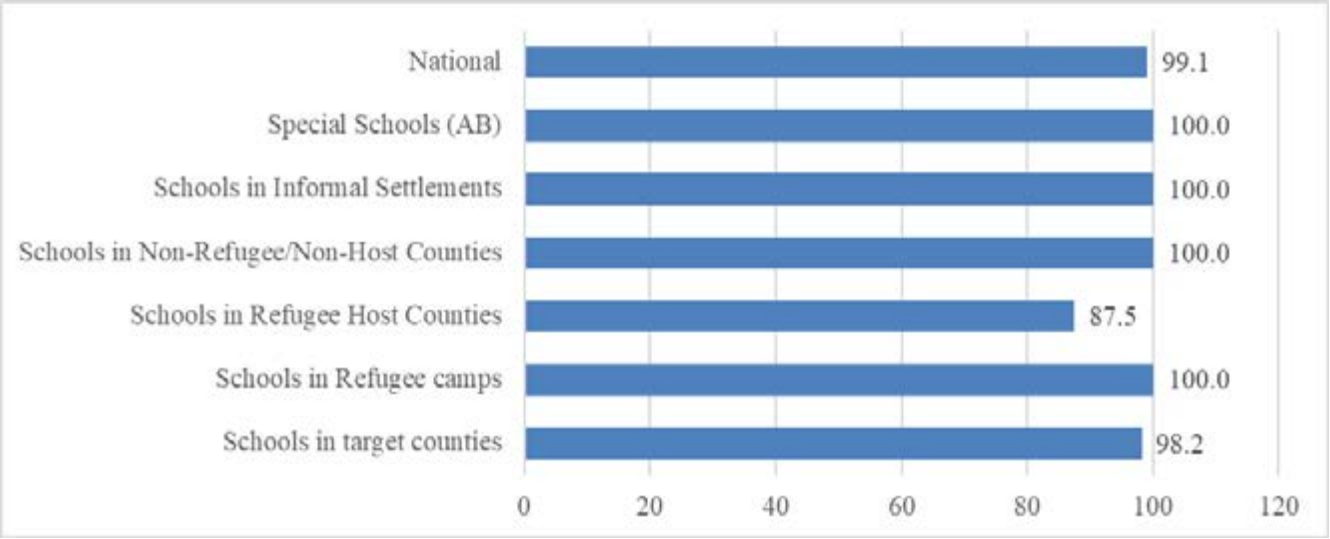


Figure 51 shows that nationally, 99.1% of headteachers confirmed that teachers in their schools had received training on CBC and CBA. All headteachers from special schools, schools in informal settlements, in refugee camps, and in non-refugee/non host counties reported that all teachers had received training on CBC and CBA. This underscores the Ministry of Education's strong commitment to ensuring teachers are well equipped with the necessary competencies for effective CBC and CBA implementation.

This finding aligns with the study by Waweru and Njoroge (2021), which established that the govern-

ment's efforts, supported by stakeholders such as the Teachers Service Commission (TSC) and Kenya Institute of Curriculum Development (KICD), have significantly increased CBC training coverage among primary school teachers. Further, Kamau and Wekesa (2023), emphasized that while CBC training has been widely implemented, refresher courses and continuous professional development remain crucial to addressing emerging challenges in curriculum delivery.

Further, teachers who had received training were required to indicate how effective the training was in equipping them as Grade 3 teachers. The findings are presented in Table 30.

Table 30: Effectiveness of the CBC/CBA Training

		Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Very effective	CBA	7.9	0.0	0.0	10.7	20.0	0.0	18.1
	CBC	92.1	100.0	100.0	89.3	80.0	100.0	81.9
Effective	CBA	23.6	20.0	18.2	25.0	15.8	0.0	24.6
	CBC	76.4	80.0	81.8	75.0	84.2	100.0	75.4
Somehow effective	CBA	50.0	0.0	66.7	50.0	33.3	100.0	52.1
	CBC	50.0	100.0	33.3	50.0	66.7	0.0	47.9
Not effective	CBA	80.0	100.0	0.0	77.8	0.0	100.0	69.7
	CBC	20.0	0.0	0.0	22.2	100.0	0.0	30.3

Table 30 shows that nationally, the rating of CBC was indicated 81.9 % as very effective in equipping the teachers of Grade 3. All teachers in schools in refugee camps, schools in refugee host counties and special schools indicated that CBC training was very effective. Over 80 % of teachers in schools in target counties, in non-refugee/non host counties and schools in informal settlements rated training in CBC as very effective in equipping them as Grade 3 teachers. Equipping teachers to handle Grade 3 learners through training in CBC has ensured effective implementation of the curriculum, enabling them to foster competency based learning and holistic skill development in learners.

Significant to note is that all (100%) teachers from schools in refugee camps and special schools reported that CBA training was not effective. Further, all (100%) teachers from schools in informal settlements reported that CBC training was not effective. This may impede effective implementation.

5.2.2 Teachers responsibilities in school

Effective curriculum implementation requires teachers to engage in a range of activities both within and outside the lesson. The study sought to establish the activities the teachers were involved in that support effective lesson delivery. The findings are presented in Table 31.

Table 31: Activities Teachers are Involved in

Activity	Time	Schools in Refugee camps	Schools in target counties	Schools in Refugee Host Counties	Non-Refugee Schools in Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Preparing Schemes of work	After School time	12.5	6.7	8.0	5.9	9.7	0	4.9
	Before Lessons	50.0	20.0	28.0	17.7	16.1	44.4	15.5
	During Lessons	0	0	0	0	0	0	0.5
	During school holidays	12.5	58.1	52.0	70.6	74.2	55.6	66.3
	During weekends	25.0	15.2	12.0	5.9	0	0	12.9
Lesson Planning	After School time	0	14.6	25.0	35.3	32.3	33.3	20.3
	Before Lessons	71.4	67.0	50.0	41.2	61.3	66.7	67.4
	During Breaks	0	6.8	12.5	17.7	0	0	3.9
	During Lessons	28.6	1.9	8.3	0	0	0	0.7
	During school holidays	0	1.0	0	0	3.2	0	1.0
	During weekends	0	8.7	4.2	5.9	3.2	0	6.6
Updating records of work	After School time	57.1	47.1	41.7	35.3	54.8	66.7	53.0
	Before Lessons	14.3	6.9	4.2	0	3.2	0	6.4
	During Breaks	0	24.5	20.8	29.4	29.0	22.2	25.6
	During Lessons	14.3	6.9	8.3	5.9	0	0	3.7
	During school holidays	0	1.0	0	0	0	0	0.7
	During weekends	14.3	13.7	25.0	29.4	12.9	11.1	10.6
Making lesson notes	After School time	33.3	10.9	18.2	12.5	35.5	33.3	16.3
	Before Lessons	66.7	65.4	54.6	50.0	51.6	44.4	59.8

Activity	Time	Schools in Refugee camps	Schools in target counties	Schools in Refugee Host Counties	Non-Refugee Schools in Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
	During Breaks	0	10.9	13.6	18.8	3.2	0	10.1
	During Lessons	0	2.0	0	0	3.2	0	3.7
	During school holidays	0	3.0	0	0	0	0	3.2
	During weekends	0	7.9	13.6	18.8	6.5	22.2	6.9
Administering classroom assessment	After School time	0	2.9	8.3	11.8	3.3	0	3.4
	Before Lessons	42.9	9.7	12.5	0	6.7	0	7.1
	During Breaks	0	3.9	0	0	3.3	0	3.4
	During Lessons	57.1	83.5	79.2	88.2	86.7	100.0	85.3
	During school holidays	0	0	0	0	0	0	0.3
	During weekends	0	0	0	0	0	0	0.5
Preparing teaching/ learning resources	After School time	12.5	14.6	25.0	31.3	36.7	0	15.8
	Before Lessons	75.0	62.1	62.5	56.3	40.0	66.7	60.1
	During Breaks	0	8.7	0	0	6.7	11.1	7.9
	During Lessons	0	1.9	0	0	3.3	22.2	2.5
	During school holidays	0	1.9	4.2	6.3	0	0	2.0
	During weekends	12.5	10.7	8.3	6.3	13.3	0	11.8

Activity	Time	Schools in Refugee camps	Schools in target counties	Schools in Refugee Host Counties	Non-Refugee Schools in Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Marking learners' work	After School time	0	1.9	4.2	5.9	0	0	4.2
	Before Lessons	28.6	4.9	8.3	0	10.3	0	4.2
	During Breaks	28.6	35.0	25.0	23.5	17.2	33.3	35.0
	During Lessons	28.6	56.3	54.2	64.7	72.4	55.6	55.4
	During school holidays	0	0	0	0	0	0	0.3
	During weekends	14.3	1.9	8.3	5.9	0	11.1	1.0

Table 31 reveals that nationally, 66.3% of teachers prepared schemes of work during school holidays. However, this figure drops in schools in refugee camps (12.5%) and special schools (55.6%), indicating time constraints that could compromise lesson quality (Smith & Jones, 2020).

Despite this, 67.4% of teachers nationally reported preparing lesson plans before teaching. Schools in refugee camps had had slightly higher rates (71.4%), suggesting a focus on structured delivery (Johnson & Brown, 2019). Further, 59.8% of teachers prepared lesson notes before lessons, and 55.4% marked learners' work during class time, indicating a possible lack of time for formative assessment preparation. A key concern is that 22.2% of teachers in special schools prepare teaching and learning resources during lessons, an issue that can undermine lesson effectiveness and learner engagement (Doe, 2021). These findings highlight the need for workload management and structured planning support to enhance instructional quality and learning outcomes.

The study further sought to establish whether teachers have other responsibilities besides teaching and what the responsibilities were. The findings are presented in Table 32.

Table 32: Responsibilities Teachers are Involved in Apart from Teaching

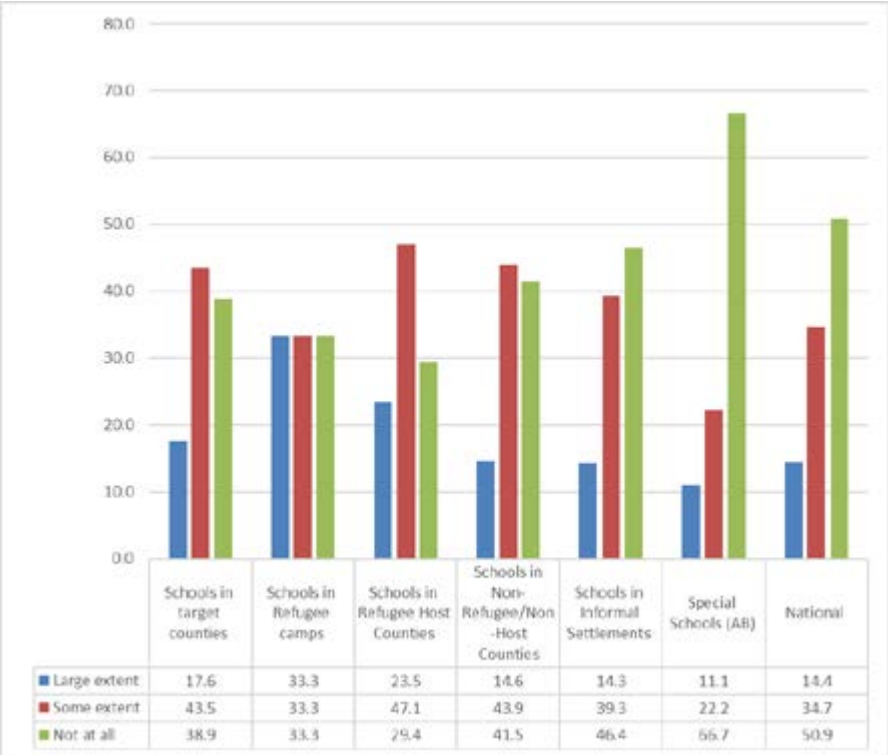
Responsibility	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/ Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Teachers' involvement in other responsibilities (Yes)	94.4	88.9	94.1	95.1	87.1	88.9	93.3

Responsibility	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/ Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Other responsibilities:							
Class teacher	43.1	60.0	43.3	41.7	44.7	36.8	45.6
Games teacher	16.3	20.0	13.3	16.7	10.6	10.5	13.2
Senior teacher	6.9	0.0	6.7	7.5	8.5	0.0	5.8
Deputy head teacher	8.1	0.0	6.7	9.2	2.1	0.0	3.7
Headteacher	1.3	0.0	0.0	1.7	0.0	0.0	0.3
Boarding Teacher	0.6	0.0	3.3	0.0	0.0	10.5	1.1
Guidance and Counseling	15.0	10.0	23.3	13.3	21.3	15.8	16.7
Others	8.8	10.0	3.3	10.0	12.8	26.3	13.6

Table 34 shows that nationally, 93.3% of teachers hold roles beyond teaching, with slight variations across school categories, 95.1% in non-refugee/ non-host counties, 94.4% in target counties, and 94.1% in schools in refugee host counties. While such involvement fosters holistic school environments (Johnson & Brown, 2019), it can strain lesson preparation and impact instructional quality (Smith & Jones, 2020; Doe, 2021). Nationally, 45.6% of teachers serve as class teachers, and 16.7% handle guidance and counselling, with roles varying by school type. Notably, few teachers reported serving as games teachers, despite the curriculum's emphasis on sports for learners' physical and social development.

The study further examined the extent to which teachers' additional responsibilities affected their teaching. The findings are presented in Figure 52.

Figure 52: Effect of Responsibility on Teaching



	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Large extent	17.6	33.3	23.5	14.6	14.3	11.1	14.4
Some extent	43.5	33.3	47.1	43.9	39.3	22.2	34.7
Not at all	38.9	33.3	29.4	41.5	46.4	66.7	50.9

Figure 52 shows that nationally, 50.9% of teachers reported that their teaching was not affected by additional responsibilities. However, the impact varied significantly across school categories. In schools in refugee camps, 33.3% of teachers reported that other duties affected teaching to a large extent, the highest among all groups, while 23.5% of teachers in refugee host counties and 17.6% in schools target counties reported similar concerns. Additionally, 47.1% of teachers in schools in refugee host counties and 43.5% in target counties indicated that responsibilities affected teaching to a small extent. These findings suggest that while many teachers manage their duties well, a considerable proportion of experience strain that could hinder effective curriculum delivery.

5.2.3 Availability and adequacy of personnel to support learners and teachers with special needs and disability

Personnel supporting learners with special needs and disabilities play a crucial role in ensuring equitable access to education and fostering an inclusive learning environment. Special education teachers assist in developing and implementing Individualized Education Programmes (IEP), adapt lessons and collaborate with professionals to support learners' success. Support from personnel is crucial in a school to assist learners and teachers with special needs and disabilities.

Table 33 shows the availability and adequacy of these support staff.

Table 33: Availability and Adequacy of Personnel to Support learners and Teachers with Special Needs and Disability

	Refugee (%)		Lowest quintile (%)		Refugee host (%)		Non-refugee (%)		Informal (%)		SNE Age-based (%)		National (%)	
	Availability	Adequacy	Availability	Adequacy	Availability	Adequacy	Availability	Adequacy	Availability	Adequacy	Availability	Adequacy	Availability	Adequacy
a) Sighted guides for the visually impaired (1:1)	20.0	0.0	1.9	0.0	7.1	0.0	0.0	0.0	0.0	0.0	16.7	0.0	2.3	1.4
b) Orientation and mobility instructors	20.0	0.0	3.7	0.0	7.1	0.0	0.0	0.0	0.0	0.0	66.7	0.0	4.7	1.0
c) Transcribers	20.0	0.0	3.8	0.0	7.1	0.0	0.0	0.0	0.0	0.0	50.0	20.0	2.8	1.0
d) Sign language interpreters	0.0	25.0	5.6	4.0	7.1	15.4	11.1	11.1	0.0	0.0	16.7	40.0	1.9	2.0
e) Teacher aides	0.0	25.0	3.7	4.0	0.0	7.7	0.0	0.0	0.0	0.0	33.3	33.3	7.0	5.3
f) Specialised care givers	20.0	25.0	1.9	2.0	7.1	7.7	0.0	0.0	0.0	0.0	100.0	66.7	5.6	3.4
g) SNE trained teachers	60.0	25.0	18.2	8.0	28.6	15.4	11.1	11.1	0.0	0.0	100.0	66.7	14.9	10.2

Table 33 shows that nationally, availability ranges from 1.9% (sign language interpreters) to 14.9% (SNE trained teachers), with adequacy consistently lower. Schools in refugee camps report higher availability in some areas (up to 60% for SNE teachers) but adequacy remains very low or unavailable. Schools in target counties and refugee host counties show extremely low or no availability and adequacy, reflecting major service gaps. Schools in non refugee/ non-refugee host counties perform slightly better in some categories but still fall short. Special schools (AB) stand out, with much higher availability (up to 100%) and better adequacy, though gaps remain for example, adequacy for sign language interpreters is 40%. Overall, the data highlights serious shortages of specialized staff, especially in mainstream and refugee schools, indicating a need for improved investment and capacity building in inclusive education.

5.3 Effective Lesson Delivery

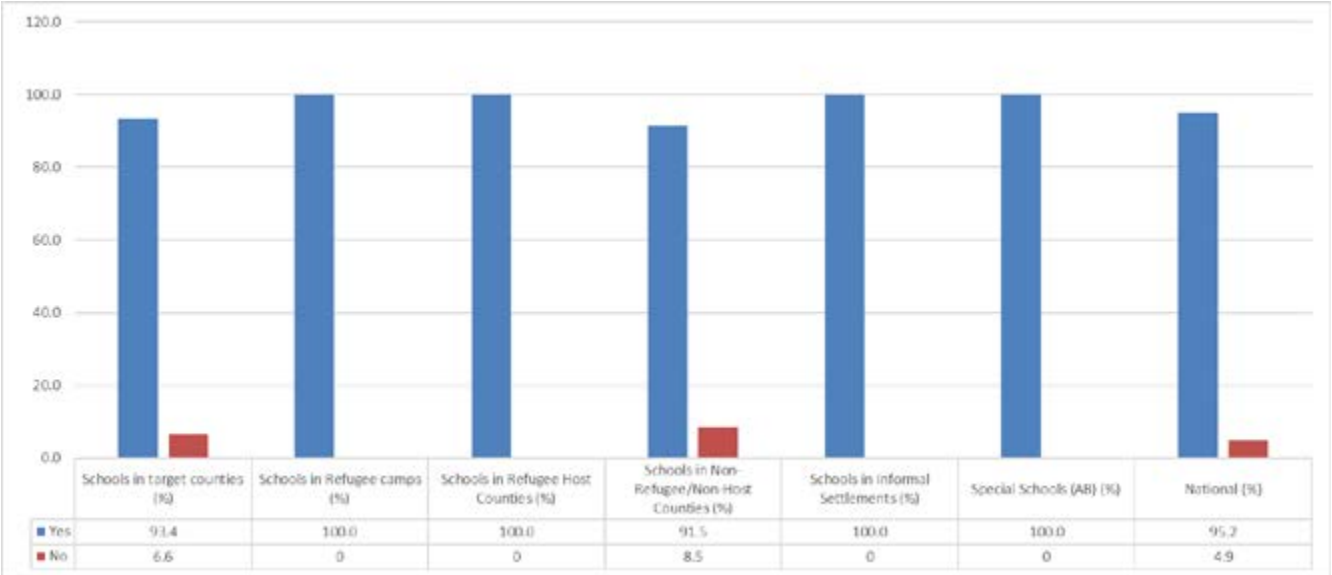
This section presents findings on school-level practices that support effective lesson delivery within the Competency-Based Curriculum (CBC) framework. Specifically, it examines the availability and use of curriculum designs and professional documents; teacher absenteeism and workload; learning areas without teachers; the use of authentic and learner-centered instructional approaches; provi-

sion of remedial and extended learning activities; homework practices; and parental involvement in supporting learners' academic work.

5.3.1 Availability of curriculum designs

Curriculum designs provide a structured guide for planning, delivering, and assessing instruction. This study sought to establish whether schools had curriculum designs. The findings are presented in Figure 53.

Figure 53: Availability of Curriculum Designs in Schools



	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Yes	93.4	100.0	100.0	91.5	100.0	100.0	95.2
No	6.6	0	0	8.5	0	0	4.9

Figure 53 indicates that nationally, 95.2% of schools had curriculum designs. This demonstrates that the vast majority of schools across all categories reported high availability (above 90%), including schools in non-refugee/non-host counties and target counties.

These findings align with previous research indicating that most schools have access to curriculum designs. For instance, Smith and Brown (2020) found that over 95% of schools had curriculum designs, emphasizing their widespread availability. Similarly, Johnson (2018) reported that curriculum designs were available in 92% of schools surveyed, reinforcing the importance of structured curriculum planning in education systems.

5.3.2 Preparation and use of Professional Documents by Teachers

Preparation and use of professional documents is important in tracking learner progress, ensuring compliance with regulations, and providing valuable data for informed decision-making. The study sought to establish whether teachers prepare and use the specified documents. The findings are presented in Table 34.

Table 34: Preparation and use of Professional Documents

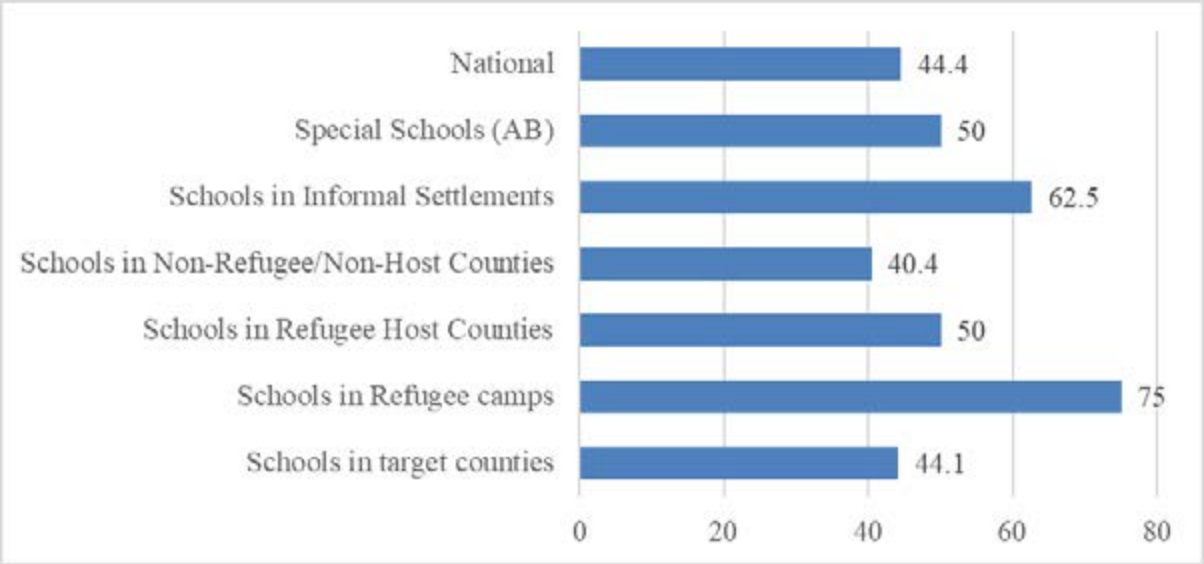
Professional records	Activity	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/ Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
a) Schemes of work	Preparation	100.0	100.0	100.0	100.0	100.0	100.0	98.7
	Usage	100.0	100.0	100.0	100.0	100.0	100.0	100.0
b) Lesson Plan	Preparation	96.7	100.0	77.8	100.0	100.0	100.0	98.3
	Usage	100.0	100.0	100.0	100.0	100.0	83.3	99.1
c) Record of work covered	Preparation	95.0	100.0	77.8	97.8	93.3	100.0	97.4
	Usage	100.0	100.0	100.0	100.0	100.0	100.0	100.0
d) Progress records	Preparation	96.7	100.0	77.8	100.0	93.3	100.0	97.4
	Usage	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 36 shows high national compliance with the preparation and use of professional documents, with 98.7% of teachers preparing and 100% using schemes of work, aligning with Kafu (2015) who emphasizes structured planning for professional teaching. However, disparities emerge in lesson plan preparation where 77.8% of schools in refugee host counties reported preparation. It is worth noting that schools in which the preparation of lesson plans was reported also indicated consistent use of the plans in instructional delivery, supporting Ushie and Daniel's (2022) view that effective instruction relies on thorough preparation. Record-keeping practices were strong in schools in refugee camps and special schools (100%), but slightly lower in schools in non-refugee/non-host counties (97.8%) and informal settlements (93.3%), suggesting gaps in internal quality assurance. Progress record preparation was lowest in schools in refugee host counties (77.8%). Despite these gaps, 100% usage of professional documents across all categories highlights their critical role in curriculum implementation.

5.3.3 Teacher Absenteeism in Schools

Teacher absenteeism disrupts learning, affects learners' attainment of outcomes, and delays curriculum coverage. Headteachers were asked to indicate whether they experienced teacher absenteeism in their schools. The findings are presented in Figure 54.

Figure 54: Teacher Absenteeism



It is observable from Figure 54 that teacher absenteeism was prevalent across all the school categories. Nationally, 44.4% of headteachers reported teacher absenteeism in their schools. Disparities were observed across school categories. For instance, headteachers from schools in refugee camps reported high teacher absenteeism at 75% followed by schools in informal settlements, special schools and schools in refugee host counties at 62.5%, 50.0% and 50.0% respectively. High teacher absenteeism is likely to negatively impact curriculum implementation and lead to learning gaps (Juma & Stonier, 2023).

Further, headteachers who indicated experiencing teacher absenteeism were asked to indicate the five main reasons for teacher absenteeism from the list provided. The findings are presented in Table 35.

Table 35: Reasons for Teacher Absenteeism

Reason for teacher absenteeism	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/ Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Sickness	32.6	40.0	30.0	32.3	36.0	20.0	32.0
Drug and substance abuse	0.0	0.0	0.0	0.0	4.0	0.0	2.9
Family obligations	19.6	40.0	20.0	16.1	12.0	20.0	18.9
Cultural and religious aspects	4.4	0.0	0.0	6.5	0.0	20.0	2.9
Gender Based violence	0.0	0.0	0.0	0.0	4.0	0.0	1.7
Truancy	0.0	0.0	0.0	0.0	0.0	0.0	1.7
Official duties	26.1	20.0	30.0	25.8	28.0	20.0	28.0
Insecurity	4.4	0.0	10.0	3.2	4.0	0.0	1.7
Natural calamities	13.0	0.0	10.0	16.1	12.0	20.0	10.3

Table 35 reveals that sickness is the leading cause of teacher absenteeism nationally, as cited by 32% of headteachers, with even higher rates in schools in refugee camps (40%) and informal settlements (36%). Official duties, including workshops and CPD sessions, also contribute significantly, as reported at up to 30% in some regions. Other factors include poor working conditions, low motivation, and health issues (UNESCO, 2019). These trends echo findings from other developing countries, highlighting the need for policies that strengthen accountability, improve conditions, and implement structured monitoring (Chaudhury et al., 2006; Duflo et al., 2012; Das et al., 2007).

5.3.4 Learning Areas without teachers

A well-balanced teacher distribution across learning areas is essential for effective curriculum delivery and attainment learning outcomes. The study sought to establish the learning areas that lacked teachers up to grade six. The findings are presented in Table 36.

Table 36: Learning Areas Without Teachers

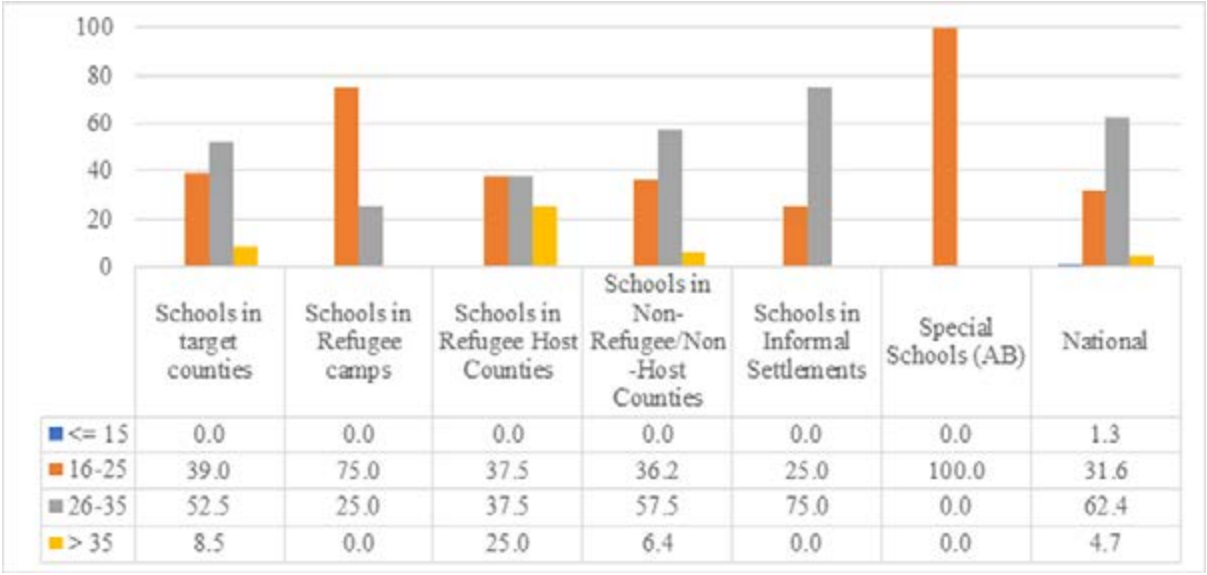
Subjects that lack teachers	Schools in Refugee Camps	Schools in target counties	Schools in Refugee Host Counties	Non-Refugee Schools in Host Counties	Schools in Informal Settlements	Special Schools(AB)	National
Mathematics	0.0	6.5	0.0	0.0	7.0	16.1	6.4
English	0.0	6.5	4.8	5.9	0.0	6.5	6.1
Kiswahili / Kenya Sign Language	25.0	10.8	14.3	11.8	9.3	0.0	7.7
Agriculture	0.0	6.5	0.0	0.0	4.7	6.5	5.4
Home Science	0.0	7.2	4.8	5.9	9.3	12.9	8.2
Science and Technology	0.0	3.6	0.0	0.0	2.3	12.9	5.4
Physical and Health Education	25.0	14.4	9.5	5.9	14.0	6.5	13.6
Art and Craft	50.0	23.0	42.9	41.2	18.6	16.1	21.8
Music	0.0	19.4	23.8	29.4	27.9	19.4	21.8
Social Studies	0.0	1.4	0.0	0.0	2.3	3.2	2.0
Religious Education	0.0	0.7	0.0	0.0	4.7	0.0	1.8

Table 36 highlights widespread teacher shortages in learning areas across all school categories. Nationally, Art and Craft and Music each lack teachers in 21.8% of schools, and Physical and Health Education in 13.6%. Shortages are particularly acute in schools in refugee camps, where 50% lack Art and Craft teachers and 25% lack Physical and Health Education teachers. Other gaps exist in Kiswahili/ Kenya and Sign Language (25%) in schools in refugee camps. These shortages hinder curriculum delivery, calling for targeted recruitment, specialized training, and incentives (Dryden-Peterson, 2015; Nag et al., 2020).

5.3.5 Teachers Workload

Appropriate teachers' workload ensures balancing instructional tasks with additional responsibilities, which influences effectiveness, and the quality of curriculum delivery. The headteachers were required to indicate the number of lessons allocated to teachers per week. The findings are presented in Figure 55.

Figure 55: Teacher Workload



	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
<= 15	0.0	0.0	0.0	0.0	0.0	0.0	1.3
16-25	39.0	75.0	37.5	36.2	25.0	100.0	31.6
26-35	52.5	25.0	37.5	57.5	75.0	0.0	62.4
> 35	8.5	0.0	25.0	6.4	0.0	0.0	4.7

As shown in Figure 55, nationally, most schools allocated teachers between 16 and 35 lessons per week, with 62.4% of headteachers reporting 26 to 35 lessons, aligning with the recommended maximum of 35 lessons per week. Notably, 75.0% of schools in informal settlements and 52.5% in target counties also fell within this range. However, of concern is that 4.7% of headteachers nationally who reported workloads exceeding 35 lessons weekly. This challenge was more pronounced in 25.0% of schools in refugee host counties and non-refugee host counties, and 8.5% of schools in target counties. Such excessive workloads risk compromising instructional quality, lesson preparedness, and learning outcomes. As Kyambi (2019) highlighted, high teacher workloads hinder effective formative assessment, reduce lesson attendance, and negatively affect subject performance.

5.3.6 Authentic learning

Authentic learning is an instructional approach that connects education to real-world experiences, fostering deeper understanding and practical application of knowledge. In this study, teachers selected resources and activities from the provided list that they believed enhanced authentic learning. The findings are presented in Table 37.

Table 37: Resources/Activities that Make Learning Authentic

Resource/Activity	Rating	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Use of Realia	Large extent	72.9	42.9	82.4	73.5	80.0	88.9	77.6
	Not at all	4.7	14.3	5.9	3.6	0.0	0.0	2.5
	Some extent	22.4	42.9	11.8	22.9	20.0	11.1	20.0
Using ICT resources.	Large extent	28.3	44.4	41.2	23.8	24.1	22.2	26.5
	Not at all	13.2	22.2	11.8	12.5	0.0	0.0	11.3
	Some extent	58.5	33.3	47.1	63.8	75.9	77.8	62.3
Use of projects	Large extent	32.7	14.3	41.2	32.5	35.7	22.2	40.7
	Not at all	8.7	14.3	5.9	8.8	14.3	0.0	5.8
	Some extent	58.7	71.4	52.9	58.8	50.0	77.8	53.5
Use of resource persons	Large extent	24.8	71.4	17.7	22.2	28.6	11.1	22.9
	Not at all	16.2	0.0	17.7	17.3	14.3	11.1	13.6
	Some extent	59.1	28.6	64.7	60.5	57.1	77.8	63.5
Use of practical activities	Large extent	66.0	57.1	47.1	70.7	86.2	100.0	72.9
	Not at all	2.8	0.0	11.8	1.2	0.0	0.0	1.7
	Some extent	31.1	42.9	41.2	28.1	13.8	0.0	25.4
Demonstrations in class	Large extent	80.2	100.0	76.5	79.3	89.7	88.9	83.4
	Not at all	2.8	0.0	0.0	3.7	0.0	0.0	1.7
	Some extent	17.0	0.0	23.5	17.1	10.3	11.1	14.9

Table 37 shows that demonstrations are the most widely used method to enhance authentic learning, with 83.4% of teachers nationally adopting this approach. This was consistent across school categories. However, ICT integration remains low, except in schools in refugee camps (44.4%), likely due to external support. Special schools and schools in informal settlements face digital barriers perhaps due to limited resources. Additionally, few schools engage external resource persons, missing real-world testimonials. Strengthening ICT infrastructure and school community partnerships is vital to enrich learning experiences (Palagolla & Wickramarachchi, 2019).

5.3.7 Effectiveness of Teaching and Learning Strategies in Improving Literacy and Numeracy Proficiency

Teachers were asked to indicate the extent to which the learning methods/strategies listed were effective in improving the literacy and numeracy proficiency levels among learners. The findings are presented in Table 38

Table 38: Effectiveness of Teaching and Learning Strategies in Improving Literacy and Numeracy Proficiency

		Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Inquiry based learning	Not at all	2.8	0.0	0.0	3.7	0.0	0.0	1.3
	Large extent	58.5	55.6	75.0	55.6	70.0	50.0	56.8
	Some extent	38.7	44.4	25.0	40.7	30.0	50.0	41.9
Demonstrations and illustrations	Not at all	0.0	0.0	0.0	0.0	0.0	0.0	0.5
	Large extent	76.6	66.7	88.2	75.3	86.7	87.5	82.4
	Some extent	23.4	33.3	11.8	24.7	13.3	12.5	17.1
Role play, dramatization and story	Not at all	1.9	0.0	0.0	2.5	0.0	0.0	1.0
	Large extent	61.5	71.4	52.9	62.5	73.3	50.0	68.5
	Some extent	36.5	28.6	47.1	35.0	26.7	50.0	30.5
Collaborative and cooperative	Not at all	1.0	0.0	0.0	1.2	0.0	0.0	0.8
	Large extent	64.4	75.0	73.3	61.7	80.0	62.5	67.5
	Some extent	34.6	25.0	26.7	37.0	20.0	37.5	31.7
Use of resource persons	Not at all	9.4	25.0	11.8	7.4	6.7	12.5	7.5
	Large extent	32.1	50.0	35.3	29.6	33.3	50.0	33.3
	Some extent	58.5	25.0	52.9	63.0	60.0	37.5	59.2
Problem based learning	Not at all	4.8	28.6	0.0	3.8	0.0	0.0	3.8
	Large extent	37.5	42.9	41.2	36.3	63.3	28.6	42.4
	Some extent	57.7	28.6	58.8	60.0	36.7	71.4	53.8
Reflective learning	Not at all	1.0	0.0	0.0	1.2	0.0	12.5	1.8
	Large extent	48.6	71.4	58.8	44.4	50.0	25.0	48.4
	Some extent	50.5	28.6	41.2	54.3	50.0	62.5	49.9
Project based learning	Not at all	1.9	0.0	0.0	2.5	0.0	12.5	2.5
	Large extent	37.7	50.0	23.5	39.5	44.8	50.0	46.7
	Some extent	60.4	50.0	76.5	58.0	55.2	37.5	50.8
Peer learning	Not at all	1.9	0.0	0.0	2.5	0.0	0.0	1.5
	Large extent	66.0	75.0	70.6	64.2	75.9	62.5	69.5
	Some extent	32.1	25.0	29.4	33.3	24.1	37.5	29.0

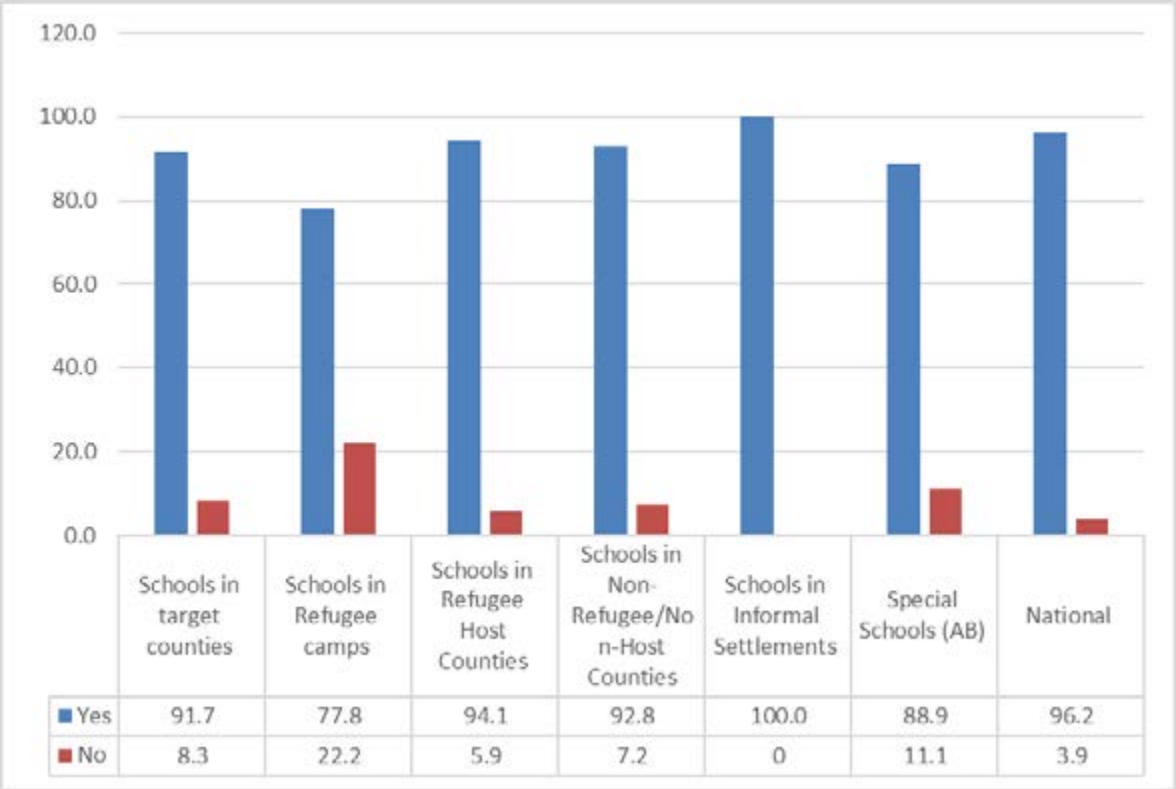
Table 38 shows varied perceptions among teachers on the effectiveness of different teaching strategies in enhancing literacy and numeracy proficiency. Nationally, demonstrations and illustrations were identified as the most effective instructional strategies, with 82.4% of teachers rating them highly. The effectiveness was even more pronounced in schools in refugee host counties (88.2%) and informal settlements (86.7%). Inquiry-based learning ranked second, with 56.8% of teachers nationally indicating that it was effective to a large extent. Stronger positive perceptions were reported in schools in refugee host counties (75.0%) and informal settlements (70.0%).

Overall, the findings underscore a preference for learner-centered, interactive methods, particularly in marginalized settings. These strategies likely promote deeper engagement, better understanding and support CBC's focus on active learning.

5.3.8 Remedial lessons

Remedial lessons play a crucial role in bridging learning gaps by providing additional support to learners who may experience challenges in certain learning areas. Teachers were asked to indicate if they offered remedial lessons to address learning gaps in their classes. The findings are presented in Figure 56.

Figure 56: Remedial Lessons



	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Yes	91.7	77.8	94.1	92.8	100.0	88.9	96.2
No	8.3	22.2	5.9	7.2	0	11.1	3.9

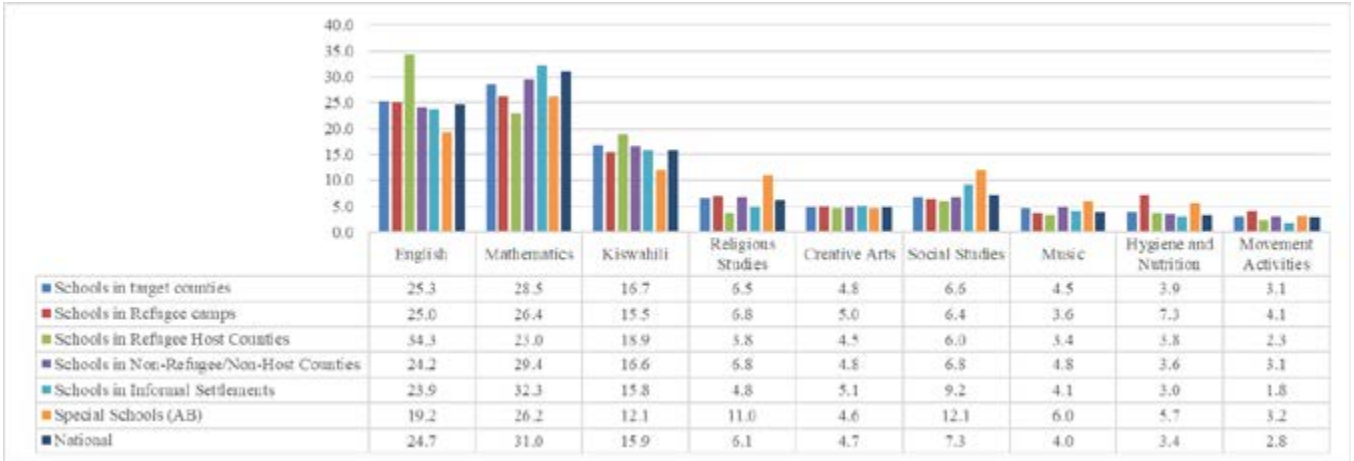
Figure 56 shows that nationally, 96.2% of teachers reported that they offer remedial lessons, indicating a strong commitment to addressing learning gaps. All teachers from schools in informal settlements and 94.1% of teachers from schools in refugee host counties reported to offer remedial lessons. A similar trend is observed by teachers from special schools (88.9%) and teachers from schools in refugee camps (77.8%).

The schools in refugee camps stand out with the highest proportion (22.2%) of teachers reporting not to be offering remedial lessons, suggesting that these schools may face resource constraints, teacher shortages, or structural limitations in providing extra support.

5.3.9 Extended Activities / homework

A well-structured lesson incorporates extended activities, which serve as supplementary learning experiences beyond classroom instruction. The study sought to find out the frequency of homework assignments across learning areas. The findings are presented in Figure 57.

Figure 57: Frequency of Homework/Assignments Across Learning Areas



	English	Mathematics	Kiswahili	Religious Studies	Creative Arts	Social Studies	Music	Hygiene and Nutrition	Movement Activities
Schools in target counties	25.3	28.5	16.7	6.5	4.8	6.6	4.5	3.9	3.1
Schools in Refugee camps	25.0	26.4	15.5	6.8	5.0	6.4	3.6	7.3	4.1
Schools in Refugee Host Counties	34.3	23.0	15.9	5.8	4.5	6.0	3.4	5.8	2.3
Schools in Non-Refugee/Non-Host Counties	24.2	29.4	16.6	6.8	4.8	6.8	4.8	3.6	3.1
Schools in Informal Settlements	23.9	32.3	15.8	4.8	5.1	9.2	4.1	3.0	1.8
Special Schools (AB)	19.2	26.2	12.1	11.0	4.6	12.1	6.0	5.7	3.2
National	24.7	31.0	15.9	6.1	4.7	7.3	4.0	3.4	2.8

Figure 57 indicates that nationally, 31.0%, 24.7%, and 15.9% of teachers assign homework/assignment to learners on a daily basis in Mathematics, English, and Kiswahili, respectively. This practice aligns with the focus of CBC on strengthening literacy and numeracy skills. (KICD, 2020; Wambua et al., 2019). The figure further shows that homework assignments were less frequently given in Creative arts, Movement activities, and Music. Schools in refugee host counties report giving homework assignments daily in English at 34.3%, while those informal settlements lead in Mathematics (32.3%). Special schools show a notable focus on Religious Studies (11.0%).

5.3.10 Parental Involvement in Learners' Homework

Parental involvement in learners' work strengthens academic support, boosts motivation, and enhances attainment of learning outcomes. Learners were required to indicate if parents were involved in their homework. The results are presented in Figure 58.

Figure 58: Parental/ guardian Involvement in Learners' Homework

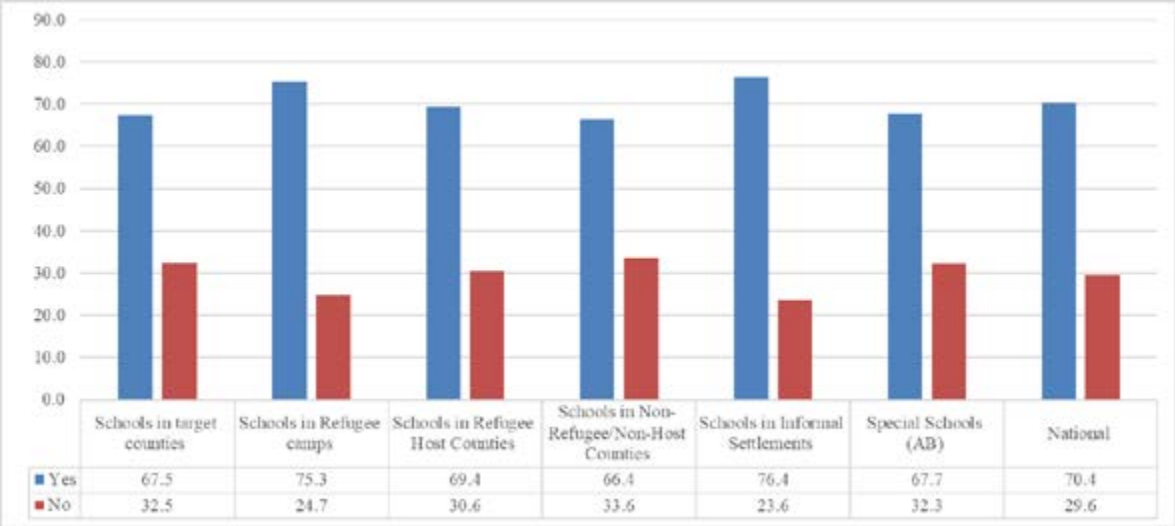


Figure 58 shows that nationally, 70.4% of learners report receiving help from parents or guardians, while 29.6% do not, highlighting a significant proportion lacking home support. Higher parental involvement is reported in schools in informal settlements (76.4%) and in refugee camps (75.3%), likely compensating for limited school resources. Special schools show the lowest support (67.7%), possibly due to the specialized needs of learners.

Focus group discussions confirmed that parents support learners with homework and monitor assignments. However, several barriers persist, including demanding work schedules, low literacy levels, limited understanding of the Competency-Based Curriculum (CBC), lack of internet access, inadequate communication from schools, and the high cost of learning materials. Parents also reported difficulties managing time, particularly in single-parent households, and expressed frustration with the resource demands associated with CBC. Many struggles with assignments that require digital access or specific materials they cannot afford. Weak coordination and delayed communication from schools further constrain meaningful parental involvement.

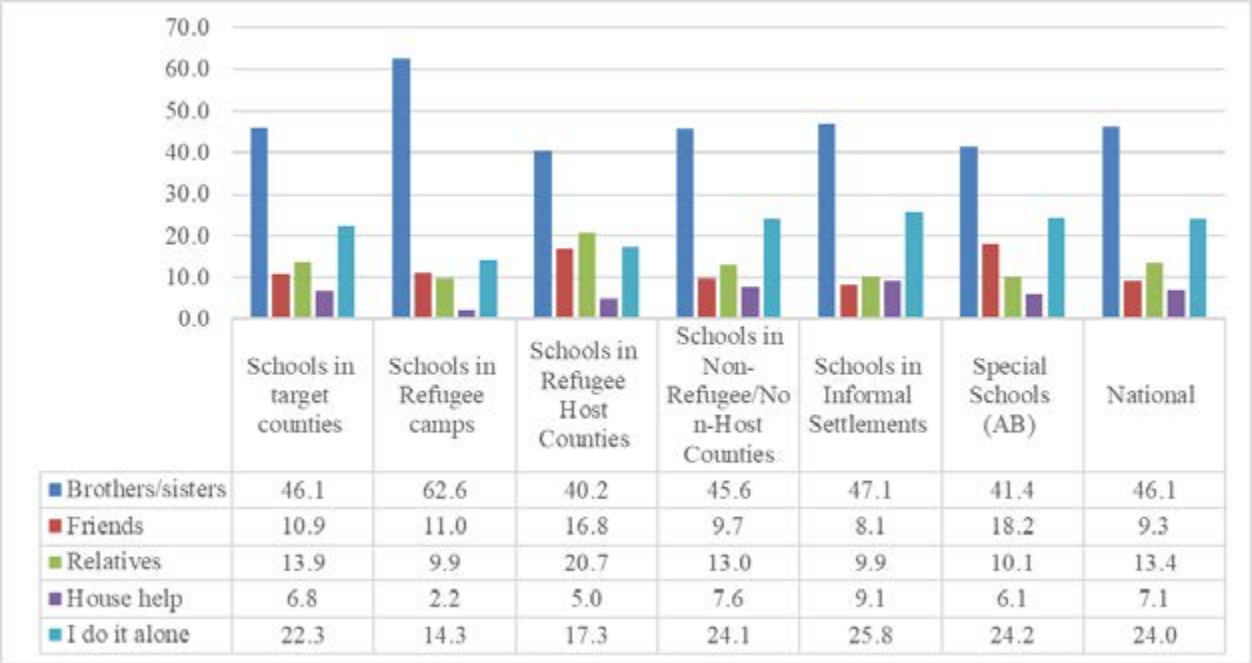
These findings highlight the need for targeted strategies to strengthen parental engagement, including more flexible and timely school communication, capacity-building initiatives to enhance parents' understanding of CBC approaches, improved access to affordable learning materials, and interventions to bridge digital gaps. Strengthened support systems will help ensure that all learners, regardless of background, benefit from sustained home–

school collaboration to improve learning outcomes.

5.3.11 Persons who assist learners with homework

Learners were asked to identify from the list provided the persons who assisted them with the homework. The findings are presented in Figure 59.

Figure 59: Persons who Assist Learners with Homework



	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Brothers/sisters	46.1	62.6	40.2	45.6	47.1	41.4	46.1
Friends	10.9	11.0	16.8	9.7	8.1	18.2	9.3
Relatives	13.9	9.9	20.7	13.0	9.9	10.1	13.4
House help	6.8	2.2	5.0	7.6	9.1	6.1	7.1
I do it alone	22.3	14.3	17.3	24.1	25.8	24.2	24.0

The findings reveal that nationally 46.1% of learners receive support on homework from their siblings, making them the most common source of assistance. This trend is most prominent in schools in refugee camps (62.6%), suggesting that older siblings play a crucial academic support role, likely due to limited parental availability or literacy. Schools in informal settlements (47.1%) and non-refugee host counties (45.6%) also show strong sibling support, reinforcing the role of extended family in facilitating learning.

While relatives (13.4%) and friends (9.3%) provide some support, 24.0% of learners complete homework independently, raising concerns about access to academic guidance. This percentage is even higher in special schools (24.2%), schools in informal settlements (25.8%), and schools in non-refugee host counties (24.1%), potentially indicating limited adult supervision or engagement. In special schools, 18.2% of learners rely on peers, showing the importance of collaborative learning in settings with specialized needs.

Parent focus group discussions (FGDs) further confirmed the diversity of homework support sources. Parents described offering guidance rather than providing direct answers. As one parent noted, "*I use a different example to show how it's done, then let him work on his homework*" (Parent, Kitui County). Others reported hiring tutors, "*You find for them a tutor*" (Parent, Uasin Gishu), or consulting teachers directly when learners experienced difficulties. Older siblings and peers also emerged as important sources of support, particularly when parents were unavailable: "*The child asks their older sibling to help with assignments*" (Parent, Kajiado).

Some parents acknowledged using digital tools to support learning: "*Some homework requires you to Google*" (Parent, Kisumu), underscoring the increasing reliance on online resources. These findings highlight the need to strengthen both home and school-based support systems to enhance extended learning opportunities.

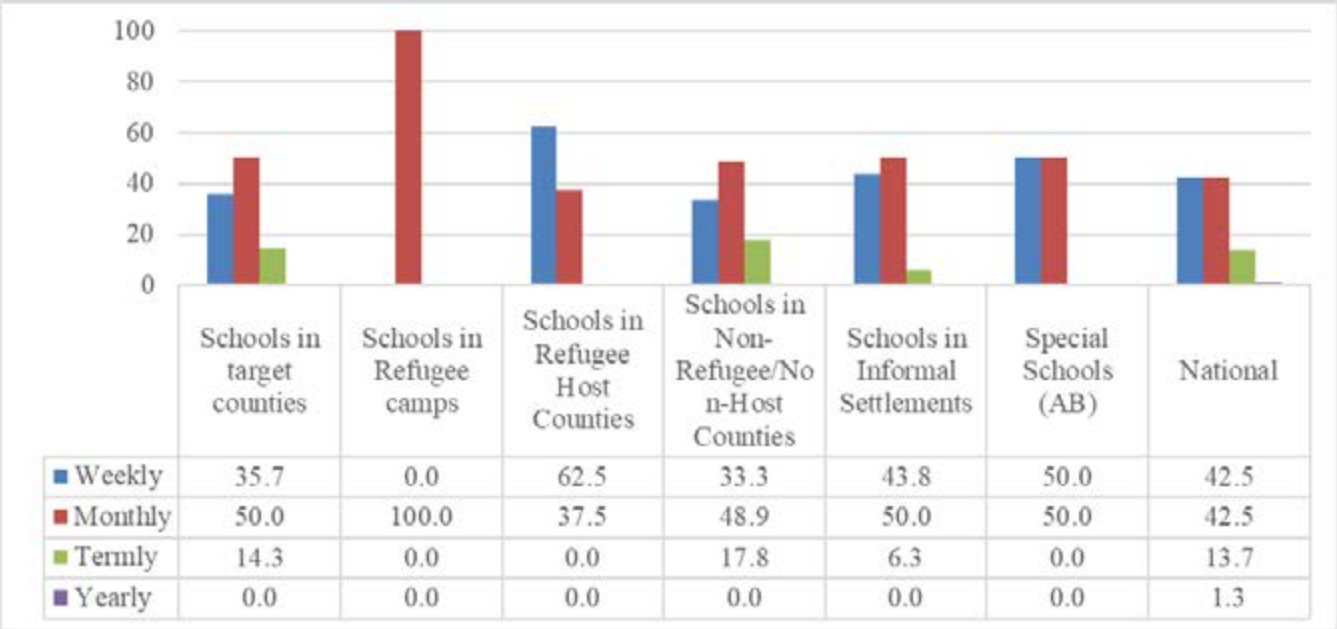
5.4 Competency Based Assessment

Assessment is a central pillar of Competence Based Education. It adopts a learner-centered approach that emphasizes the development of skills and continuous evaluation, rather than relying solely on traditional summative examinations. The effective use of both formative and summative assessment strategies promotes active learner engagement, deepens understanding, and supports the achievement of intended learning outcomes.

5.4.1 Frequency of classroom assessments

Classroom assessment refers to a variety of strategies and tools that teachers use to evaluate and monitor learning, understanding, and performance within the classroom setting for decision making. The headteachers were asked to indicate how often the teachers in their schools carry out classroom assessments. Figure 60 presents the findings.

Figure 60: Frequency of Administration of Classroom Assessment



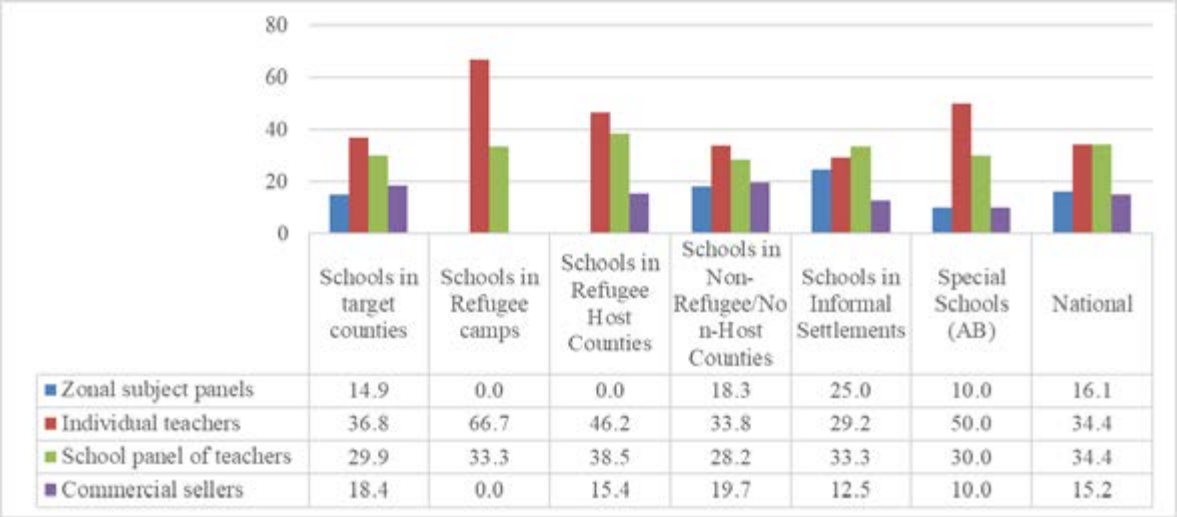
	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Weekly	35.7	0.0	62.5	33.3	43.8	50.0	42.5
Monthly	50.0	100.0	37.5	48.9	50.0	50.0	42.5
Termly	14.3	0.0	0.0	17.8	6.3	0.0	13.7
Yearly	0.0	0.0	0.0	0.0	0.0	0.0	1.3

From Figure 60, it is observable that 42.5% of headteachers nationally reported that teachers conduct classroom assessments weekly or monthly. In schools in refugee host counties, 62.5% of headteachers reported that teachers conducted weekly assessments, followed by special schools (50.0%), schools in informal settlements (43.8%), and schools in target counties (35.7%). All head teachers from schools in refugee camps indicated teachers conducted monthly assessments, while 50% of headteachers in target counties, informal settlements, and special schools also indicated that teachers conducted monthly assessments. This may reflect inadequate teacher capacity to regularly develop assessments, aligning with Jepchumba et al. (2024), who found that teachers' pedagogical skills in diverse assessment methods remain insufficient. Notably, headteachers from most school categories, except those in non-refugee/non-host counties (17.8%), target counties (14.3%), and informal settlements (6.3%), reported that teachers did not conduct termly assessments, possibly due to resource and staffing challenges. These findings echo Kamau and Muthoni (2018) on the importance of systematic assessments and Ochieng et al. (2020), who highlighted how resource constraints hinder consistent assessment practices.

5.4.2 Sources of formative assessments

Formative assessment is an ongoing process of evaluating learning during the instructional process to provide feedback and guide improvement. The headteachers were asked to report on the various sources of formative assessments in their schools. Findings are presented in Figure 61.

Figure 61: Sources of Formative Assessments



	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Zonal subject panels	14.9	0.0	0.0	18.3	25.0	10.0	16.1
Individual teachers	36.8	66.7	46.2	33.8	29.2	50.0	34.4
School panel of teachers	29.9	33.3	38.5	28.2	33.3	30.0	34.4
Commercial sellers	18.4	0.0	15.4	19.7	12.5	10.0	15.2

From Figure 61, nationally, the main sources of formative assessments were those developed by individual teachers and school panels (34.4%), aligning with research indicating teacher autonomy in assessment (Kamau & Muthoni, 2018). Most assessments were set by teachers, as reported by 66.7% of headteachers in schools in refugee camps, 50% in special schools, and 46.2% in schools in refugee host counties. This suggests teachers have the capacity to develop assessment tools. However, use of assessments from commercial sellers was reported in schools in non-refugee/non-host host counties (19.7%), target counties (18.4%), refugee host counties (15.4%), and special schools (10%), raising concerns about quality, as these tools may lack professional validation.

5.4.3 Tools and methods of assessment

Effectiveness of assessment largely depends on the tools and methods used, which ensure accurate evaluation, fair judgment, and meaningful feedback. By using appropriate assessment strategies in schools, teachers can enhance learning experiences, improve performance, and support informed decision-making. The headteachers were asked to indicate the extent to which teachers used the specified tools and methods for assessment in their schools. The findings are presented in Table 39.

Table 39: Assessment Tools and Methods Used by Teachers

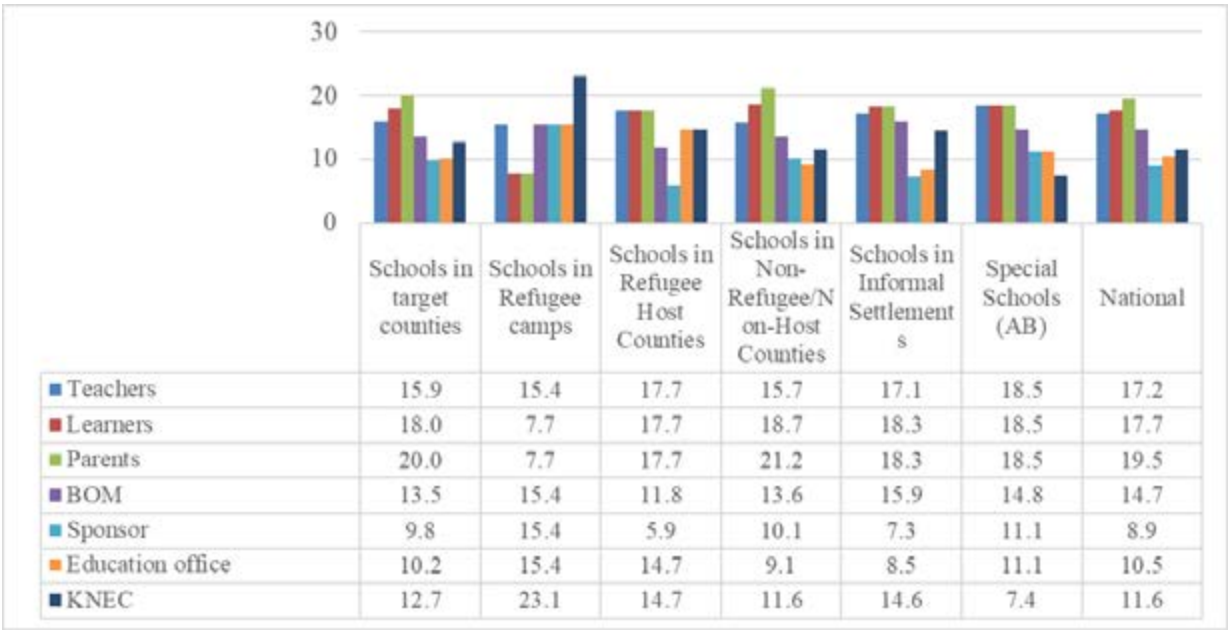
Assessment tools	Extend	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Projects	Large extent	37.0	0.0	25.0	40.9	33.3	50.0	36.8
	Some extent	59.3	100.0	75.0	54.6	66.7	50.0	61.0
	Not at all	3.7	0.0	0.0	4.6	0.0	0.0	2.2
Questions and Answer	Large extent	80.0	100.0	87.5	77.8	100.0	100.0	86.9
	Some extent	20.0	0.0	12.5	22.2	0.0	0.0	12.7
	Not at all	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Portfolio	Large extent	33.9	66.7	62.5	26.7	26.7	33.3	35.3
	Some extent	60.7	33.3	37.5	66.7	73.3	66.7	61.1
	Not at all	5.4	0.0	0.0	6.7	0.0	0.0	3.6
Oral/ Aural questions	Large extent	78.2	100.0	85.7	75.6	100.0	66.7	82.0
	Some extent	21.8	0.0	14.3	24.4	0.0	33.3	17.6
	Not at all	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Questionnaires	Large extent	25.5	33.3	37.5	22.7	26.7	0.0	22.4
	Some extent	65.5	33.3	62.5	68.2	53.3	60.0	63.9
	Not at all	9.1	33.3	0.0	9.1	20.0	40.0	13.7
Checklist	Large extent	24.1	33.3	0.0	27.3	26.7	40.0	34.1
	Some extent	72.2	66.7	100.0	68.2	66.7	40.0	63.1
	Not at all	3.7	0.0	0.0	4.6	6.7	20.0	2.8
Observation Schedule	Large extent	33.3	50.0	16.7	34.9	53.3	83.3	48.6
	Some extent	62.8	0.0	83.3	62.8	46.7	16.7	50.0
	Not at all	3.9	50.0	0.0	2.3	0.0	0.0	1.4
Written tests	Large extent	82.1	66.7	85.7	82.6	100.0	83.3	81.6
	Some extent	14.3	0.0	14.3	15.2	0.0	16.7	17.5
	Not at all	3.6	33.3	0.0	2.2	0.0	0.0	0.9
Journals	Large extent	2.0	0.0	0.0	2.4	7.1	0.0	5.7
	Some extent	66.0	0.0	85.7	64.3	71.4	75.0	62.4
	Not at all	32.0	100.0	14.3	33.3	21.4	25.0	31.9

Nationally, over 80% of headteachers reported that teachers widely used question/answer, oral/aural, and written test assessments, confirming Kamau and Muthoni's (2018) findings that these remain central in Kenyan primary schools. Similar trends appeared across school categories, except for oral/aural use in target counties (78.2%) and in schools in informal settlements (100%). Over 50% of headteachers reported some use of projects, checklists, and observation schedules. Notably, 100% of headteachers from schools in refugee camps reported that journals were not used, likely due to limited access to information and related resources. Use of varied methods of assessment align with Ochieng et al. (2020), who advocate diversified tools for holistic learner assessment.

5.4.4 Stakeholders to whom assessment feedback is communicated

Communicating assessment feedback to stakeholders is crucial as it helps align expectations, address concerns, and drive strategic actions for better outcomes. Headteachers were required to indicate the key stakeholders to whom assessment feedback was communicated. The findings are presented in figure 62.

Figure 62: Stakeholders to Whom Assessment Feedback is Communicated



	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Teachers	15.9	15.4	17.7	15.7	17.1	18.5	17.2
Learners	18.0	7.7	17.7	18.7	18.3	18.5	17.7
Parents	20.0	7.7	17.7	21.2	18.3	18.5	19.5
BOM	13.5	15.4	11.8	13.6	15.9	14.8	14.7
Sponsor	9.8	15.4	5.9	10.1	7.3	11.1	8.9
Education office	10.2	15.4	14.7	9.1	8.5	11.1	10.5
KNEC	12.7	23.1	14.7	11.6	14.6	7.4	11.6

The findings from Figure 62 show that parents are the main recipients of assessment feedback as indicated by 19.5% of headteachers nationally. This also is evident in schools in non-refugee/non-host counties, target counties and special schools with headteachers indicating that parents received assessment feedback at 21.2%, 20.0%, and 18.5% respectively. However, in schools in refugee camps, 7.7% of head teachers reported sharing feedback with parents, while 23.1% reported sharing feedback with KNEC.

Grade 3 parents' Focus Group Discussions revealed contrasting experiences regarding feedback mechanisms. While some parents confirmed receiving ongoing feedback, mainly through marked examination scripts, others described communication as delayed, incomplete, or inaccessible. One parent observed, "*Currently, the only feedback parents get is from their children's assessment tools, not from report forms. Sometimes, report forms are delayed for three terms*" (Parent, Kilifi County). Another parent added, "*The teacher can record the child's progress and ability in the assessment book. That way, parents can know the child's progress, strengths, and weaknesses and know where to improve*" (Parent, Kitui County).

Digital platforms such as WhatsApp were cited as helpful but not universally accessible: "*Our school uses WhatsApp groups… but some parents do not have smartphones, so they miss important information*" (Parent, Kajiado County). Others noted gaps in timely communication, stating, "*Teachers don't promptly inform parents about issues like the child not performing well in school*" (Parent, Uasin Gishu County).

These findings echo studies by Kamau and Muthoni (2018) and Ochieng et al. (2020), which identified infrastructural and contextual barriers to effective feedback systems in low-resource settings

5.4.5 Extent of application of practices in assessment

The application of diverse assessment practices is crucial for a comprehensive evaluation of learning. The study sought to find out from teachers the extent to which they apply assessment practices from the list provided. The findings are given in Table 40.

Table 40: Assessment Practices

		Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Aligning assessment criteria/tasks	Large extent	53.9	83.3	62.5	50.0	48.4	77.8	52.8
	Not at all	1.0	0.0	0.0	1.2	0.0	0.0	1.3
	Some extent	45.2	16.7	37.5	48.8	51.6	22.2	45.9
Using clear assessment rubrics	Large extent	57.7	33.3	62.5	58.5	71.0	88.9	63.9
	Not at all	1.9	16.7	6.3	0.0	0.0	0.0	1.0
	Some extent	40.4	50.0	31.3	41.5	29.0	11.1	35.1
Giving clear assessment instructions	Large extent	75.7	66.7	87.5	74.1	93.6	77.8	78.2
	Not at all	0.0	0.0	0.0	0.0	0.0	0.0	0.5
	Some extent	24.3	33.3	12.5	25.9	6.5	22.2	21.3
Providing learners with timely and	Large extent	59.2	100.0	68.8	54.3	71.0	55.6	63.1
	Not at all	3.9	0.0	0.0	4.9	0.0	0.0	2.3
	Some extent	36.9	0.0	31.3	40.7	29.0	44.4	34.6
Balancing formative and summative	Large extent	51.5	50.0	43.8	53.1	64.5	55.6	58.2
	Not at all	1.9	0.0	0.0	2.5	0.0	0.0	0.8
	Some extent	46.6	50.0	56.3	44.4	35.5	44.4	41.0
Developing own assessment	Large extent	54.8	50.0	68.8	52.4	58.1	55.6	58.8
	Not at all	1.9	0.0	0.0	2.4	0.0	0.0	1.3
	Some extent	43.3	50.0	31.3	45.1	41.9	44.4	39.9

Nationally, 52.8% of teachers align assessment criteria/tasks to a large extent, with refugee camp schools leading at 83.3%. Special schools also demonstrate strong alignment at 77.8%, reflecting deliberate efforts in structured and inclusive assessment practices. Nationally, 63.9% of teachers use clear rubrics extensively, with special schools (88.9%) and informal settlements (71.0%) reporting the highest use, while schools in refugee camps lag behind at 33.3%, though 50.0% use rubrics to some extent. Schools in informal settlements lead in giving clear instructions (93.6%) compared to the national average of 78.2%. Notably, refugee camp schools report 100.0% of teachers providing feedback to a large extent, exceeding the national average of 63.1%. Additionally, 58.8% of teachers nationally develop their own assessment tasks to a large extent. In schools in non-refugee host counties for example 68.8% of teachers indicated that they develop their own assessment. These findings align with global evidence that schools in specialized or crisis contexts adopt structured, context-specific assessment strategies to overcome systemic and resource-based challenges (INEE, 2020; Mugo et al., 2021).

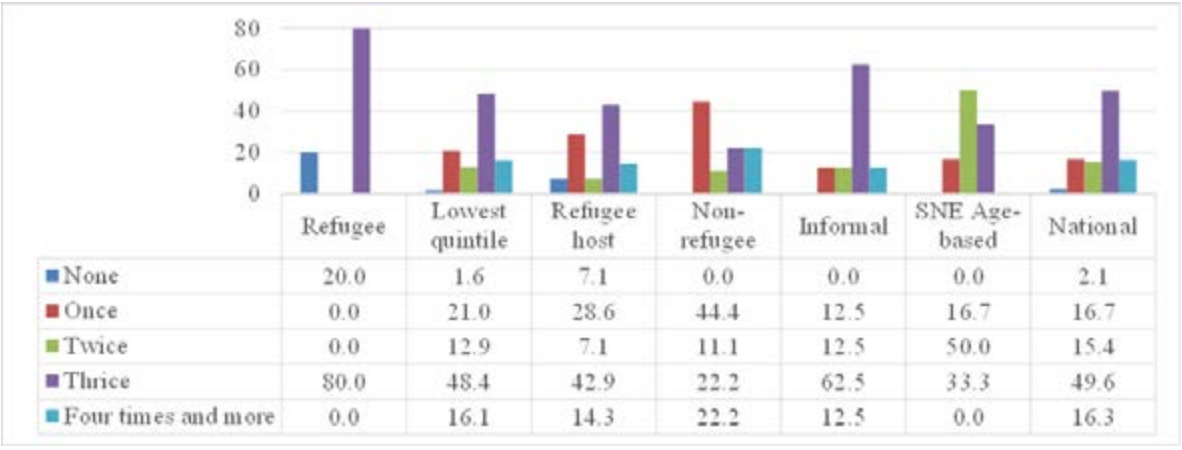
5.5 Parental Empowerment and Engagement

CBC emphasizes active parental involvement in a child's learning. Parents share responsibility with schools to create a supportive environment that fosters achievement of quality learning outcomes. Schools should empower parents to contribute to learning outcomes, ensuring their engagement at all levels of basic education (KICD,2017).

5.5.1 Frequency of school meetings with parents

School meetings with parents strengthen communication, encourage involvement, and support learner success. They provide a platform to discuss progress, address challenges, and share school updates, fostering a collaborative learning environment. The study sought to determine the frequency of school meetings with parents. Findings are presented in figure 63.

Figure 63: Frequency of School Meetings with Parents.



	Refugee	Lowest quintile	Refugee host	Non-refugee	Informal	SNE Age-based	National
None	20.0	1.6	7.1	0.0	0.0	0.0	2.1
Once	0.0	21.0	28.6	44.4	12.5	16.7	16.7
Twice	0.0	12.9	7.1	11.1	12.5	50.0	15.4
Thrice	80.0	48.4	42.9	22.2	62.5	33.3	49.6
Four times and more	0.0	16.1	14.3	22.2	12.5	0.0	16.3

Figure 63 shows that nationally, 49.6% of the schools hold parent meetings three times annually, reflecting consistent efforts to engage parents in learners' progress. This practice is most pronounced in schools in refugee camps and schools in informal settlements where 80% and 62.5% of headteachers respectively indicated to have parents meeting thrice, suggesting a proactive approach in marginalized contexts. However, headteachers from schools in non-refugee host counties indicated to hold parents meetings once a year at 44.4%, indicating the need to strengthen school-parent collaboration.

Parental focus group discussions (FGDs) revealed mixed experiences regarding school engagement. Some parents, such as those in Isiolo County, cited insecurity and logistical challenges as barriers to consistent participation: "*We have school meetings once a term, but sometimes they are postponed due to insecurity…*". In contrast, others, such as parents in Bungoma, appreciated frequent interaction with schools: "*The school organizes meetings every month… This regular interaction has improved our involvement.*"Additionally, the use of digital platforms, as reported in Nyandarua—"*…the school sends us updates through WhatsApp*", illustrates emerging adaptive communication strategies aimed at strengthening home–school collaboration.

Overall, while most schools make regular efforts to engage parents, disparities exist. Strengthening structures for inclusive, consistent, and accessible parent-teacher engagement remains critical, especially in underserved regions. These findings echo research showing varied parental involvement, with Makueni County parents favoring academic clinics and PTA meetings over teacher consultations (Muthui et al., 2024).

5.5.2 Parental support to School programmes

Parental support is vital to school programmes as it strengthens learner outcomes, fosters collaboration, and enhances overall school effectiveness. The study sought to establish parental support provided to aid school programmes. The findings are presented in Table 41.

Table 41: Parental Support for School Programmes

Summary of Themes	Frequency	Percentage
Donations/Fundraising	40	20%
Providing Learning Materials	35	17%
School Feeding Programmes	25	12%
Attending Parental Engagement Activities/Events	20	10%
Volunteering for Community Work at School	15	7%
Paying BOM Teachers	10	5%
Supporting School Co-curricular Activities	8	4%
Assisting Learners with Assignments	5	2%
Enrolment Drives	1	0.50%

Table 41 shows that paying school levies is the most common form of parental support (22%), reflecting parents' financial responsibility in education, including levies, and boarding costs. This aligns with studies noting that in Kenya, parental involvement is often financial rather than academic (Muigai, 2018; Ndani & Kimani, 2010). Donations/fundraising (20%) and providing learning materials (17%) were also reported to be significant.

School feeding programs (12%) and attending parental engagement in activities (10%) reflect involvement in learners' well-being and governance. Less frequent but important contributions include volunteering (7%) and paying BOM teachers (5%). Parents help with projects like fencing and building facilities, showing commitment beyond finances.

Information obtained from FDGs revealed that parents contribute through "harambees," donate resources, and provide textbooks and stationery. A parent from Isiolo explained, *"As parents, we provide learning materials or any requirements… if a child asks for an egg, I will provide it."* Another parent added, *"Providing materials boosts the child's confidence and learning."*Parents confirmed involvement in fundraising and resource mobilization. In Uasin Gishu, a parent noted, *"We mobilized resources… tanks from NGOs like WE WORLD and WFP."* Others reported supporting infrastructure projects, like building latrines and kitchens using community labor.

Some parents participate in school decision-making, though concerns prevail about limited inclusion. One parent from Narok shared, *"We attend meetings and contribute ideas… but sometimes decisions are made without us."*Parents also monitor resource use. In Nyeri, one explained, *"We check if books are maintained."* They support infrastructure, attend school events like sports and festivals, collaborate with teachers, and engage in advocacy for child rights and school enrollment. This analysis highlights parents' multifaceted support which involves financial, material and physical participation. Academic engagement however remains limited.

5.6 Core Value, Pertinent and Contemporary Issues (PCIs) and Education for Sustainable Development (ESD)

5.6.1 Core Values

CBC integrates eight core values to guide learners' behaviour in promoting ethical conduct and positive character development. The study assessed the extent to which Grade 3 learners had acquired the core values. The findings are presented in Figure 42.

Figure 42: Learners Demonstration of Acquisition of Values

Core Value	Additional Value	Indicator	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee Counties	Schools in Informal Settlements	Special Schools (AB)	National
Unity	Love	I can use materials in class carefully without keeping to myself.	89.70%	92.90%	85.80%	90.00%	91.80%	88.30%	90.50%
Love	Responsibility	I take care of others when they are hurt	87.10%	89.60%	80.90%	87.70%	89.10%	77.40%	89.30%
Responsibility	—	I take care of my things and those of others	90.60%	98.40%	87.50%	90.30%	86.20%	84.40%	89.70%
Respect	—	I appreciate others in class and care about what they say	88.80%	84.50%	90.20%	89.00%	82.60%	85.30%	87.60%
Peace	—	I am able to solve disagreements between my friends	81.80%	82.80%	86.70%	81.20%	78.10%	72.40%	80.50%
Patriotism	—	I am aware of my culture and I love my country	90.80%	93.30%	86.40%	91.10%	92.80%	84.00%	90.70%
Social Justice	—	I like when our teacher shares things equally in class	91.60%	93.10%	90.50%	91.60%	90.50%	90.70%	91.80%
Composite Value Index	—	Average of all indicators	88.60%	90.60%	86.90%	88.70%	87.30%	83.20%	88.60%

Values were scored on four levels: At the critical concern level (below 70%) were values that needed urgent attention, developing level (70-79%) was for emerging values that were being internalized, values that were consistently demonstrated among learners were scored at proficient level (80-89%), and values deeply internalized were scored at exemplary level (90-100%).

Table 42 shows that learners across various school categories had acquired core values except in special schools, where they were at developing level for the core values of Love (77.4%) and Peace (72.4%), and schools in informal settlements where they were at developing level for the core value of Peace (78.1%). Across all school categories, learners were at an exemplary level in the core values of Social Justice and Patriotism. The exception was learners in refugee host counties and special schools, who were at the proficient level in Patriotism, at 86.4% and 84.0%, respectively. Worth noting is the relatively high proportion (90.6%) of learners acquiring the core values for schools in refugee camps. This could be attributed to experiences they might have had which compel them to embrace values as humanizing.

FGDs, highlighted parents' crucial role in instilling values. They emphasized role modeling, spiritual guidance, and social exposure. A parent from Isiolo remarked, *"As a parent, you must conduct yourself in a manner that positively affects your child. Spiritually, you need to attend church with your child."* Cultural respect was underscored, as a parent from Narok noted, *"Cultural values like greeting elders by bowing their heads… correcting bad behavior."* Parents also instill responsibility by teaching children to care for their belongings, with one noting, *"If they damage a toy, they'll have to wait until toys are purchased again."* Discipline and decision-making were highlighted, with a parent from Nyeri who said, *"We teach them to know the pros and cons of every decision they make."*

5.6.2 Pertinent and Contemporary Issues (PCIs)

PCIs in CBC are cross-cutting themes embedded across learning areas to help learners acquire the knowledge, values, skills, and attitudes necessary to navigate and respond to societal, environmental, economic, and global challenges. Questions were posed to learners designed to elicit responses that reflected their understanding and awareness of these issues. The findings are presented in Table 43

Table 43: Composite PCI Indices by Demographic Category

PCI Category	Composite Index Description	Reference Source (Grouped)	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/ Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Health	Overall Hygiene Practices Composite	Q47 (Average of A, B, C, D)	25.0 (Moderate)	25.0 (Moderate)	25.0 (Moderate)	25.0 (Moderate)	25.0 (Moderate)	25.0 (Moderate)	25.0 (Moderate)
Life Skills	Self-Esteem & Emotional Well-being Composite	Q48 (Yes) + Q50 (Inverse of Stressors)	53.1 (Moderate)	52.9 (Moderate)	52.2 (Moderate)	53.2 (Moderate)	54.6 (Moderate)	62.4 (High)	54.1 (Moderate)
Child Protection	Safety, Security & Social Connection Composite	Q51 + Q52 + Q57 (Positive Indicators)	45.1 (Moderate)	39.6 (Low)	42.8 (Low)	45.9 (Moderate)	46.9 (Moderate)	47.1 (Moderate)	47.2 (Moderate)
Social Responsibility	Pro-social Values & Environmental Awareness Composite	Q58 + Q59 + Q60 + Q61 (Positive Actions)	45.8 (Moderate)	47.5 (Moderate)	44.5 (Low)	46.1 (Moderate)	47.9 (Moderate)	51.6 (High)	48.0 (Moderate)

The Composite PCI indices were interpreted using three performance levels derived from the established threshold ranges around the national average. Percentages falling below the lower threshold were categorized at the Low performance level, indicating low awareness that required targeted support and strengthened intervention. Percentages within the middle range were classified at the moderate performance level, reflecting average demonstration of the awareness in line with national expectations. Percentages above the upper threshold were placed at the High-performance level, signifying strong and consistently demonstrated awareness, with learners exhibiting well-developed knowledge, skills, values, and attitudes in the respective domain.

It is observable from Table 43 that nationally, there is a pattern of moderate awareness across all four PCI domains (Health, Life Skills, Child Protection, and Social Responsibility). However, it masks critical vulnerabilities within specific school categories. Special Schools recorded high awareness levels in Life Skills (62.4%) and Social Responsibility (51.6%), suggesting appropriate mainstreaming of the PCIs. Notably, the awareness of Health is at 25.0% across every school category, pointing to a systemic, nationwide gap in mainstreaming of health education matters. Of concern are the schools in refugee camps recording low scores in Child Protection (39.6%), and schools in refugee host counties falling in the Low band for both Child Protection (42.8%) and Social Responsibility (44.5%). Children lacking safety and social connection are less likely to develop civic values.

5.6.3 Education for Sustainable Development

Education for Sustainable Development (ESD) in a school equips learners with the knowledge, skills, values, and attitudes needed to make responsible decisions that promote environmental integrity, social justice, and economic sustainability. It empowers learners to contribute actively to building a more sustainable future for their communities. Questions on various aspects of ESD were posed to the headteachers and the findings are presented in Table 44

Table 44: ESD Aspects in the School

ESD Index	Source Reference	Schools in Refugee host counties	Schools in non- refugee/ non host counties	Schools in informal settlements	Special Schools (AB)	National
ESD Integration in Curricula & Pedagogy	SDG 4.7.1 (UNESCO) ; Holst et al. 2024	68.3	72.5	91.7	76.0	86.0
		(Established)	(Established)	(Advanced)	(Advanced)	(Advanced)
ESD in Institutional Practice & Culture	SDG 4.7.1 (UNESCO)	46.7	40.0	57.8	58.9	62.4
		(Emerging)	(Emerging)	(Established)	(Established)	(Established)
ESD & Community Engagement	UN 2023d ; UNESCO	80.0	73.3	93.3	77.8	87.1
		(Advanced)	(Established)	(Advanced)	(Advanced)	(Advanced)

The ratings derived from the responses were categorized into three performance levels. Scores within the Emerging/Basic level (0%–50%) indicated that ESD practices were sporadic, informal, and largely dependent on individual initiatives rather than institutionalized systems. Scores within the Established/Intermediate level (51%–75%) reflected that ESD practices were systematically integrated into core school operations, with clear structures and consistent implementation. Scores within the Advanced/Transformative level (76%–100%) signified that ESD was deeply embedded in the school's culture and operations, demonstrating innovation, sustainability, and strong learner engagement.

It can be observed from table 46 that ESD Integration in Curriculum and Pedagogy, nationally was at Advanced level (86.0%), suggesting that ESD concepts are largely embedded in teaching and learning processes. Schools in informal settlements (91.7%) and Special Schools (76.0%) demonstrated particularly strong integration, both falling within the Advanced category. Schools in refugee-host counties (68.3%) and non-refugee/non-host counties (72.5%) were rated at the Established level, indicating systematic but not yet transformative integration.

Rating in ESD and Community Engagement was strongest, where the national index (87.1%) was at the advanced level. Schools in informal settlements (93.3%), refugee-host counties (80.0%), and Special Schools (77.8%) demonstrated rich embedding in the school culture Non-refugee/non-host counties (73.3%) were rated at the Established level, integration into school operations.

The most critical concern is ESD in Institutional Practice and Culture, which recorded the lowest scores nationally (62.4%), placing it at the Established level. Schools in refugee-host counties (46.7%) and non-refugee/non-host counties (40.0%) fell within the Emerging category, suggesting that ESD principles are not yet consistently embedded in governance structures, policies, and school-wide culture. However, schools in informal settlements (57.8%) and Special Schools (58.9%) reached the Established level, reflecting more structured institutional practices on ESD.

CHAPTER SIX 6

SCHOOL INPUTS AND INFRASTRUCTURE

6.1 Introduction

The World Bank's Global Program for Safer Schools views school infrastructure as the network of school facilities, grounds, buildings, furniture, and equipment that enable teachers and administrators to offer educational services (World Bank, n.d.). School input and infrastructure form key components that contribute to conducive learning environments that ultimately influence education quality, learning outcomes and learning instruction positively (NESSP 2023-2027). Proper and adequate infrastructure enhances learner engagement, supports various teaching methods, accommodates the diverse needs of learners and promotes health and safety. This chapter discusses availability, adequacy, condition and usability of school inputs and infrastructure.

6.2 School inputs and Infrastructure

School input includes teaching and learning resources while school infrastructure includes administration offices, classrooms, furniture, libraries, dormitories, ICT infrastructure, water, electricity, sick bays, adapted infrastructure, kitchen, Sanitation facilities and recreation facilities. Physical facilities play a vital role in promoting a safe and effective learning environment (UNESCO, 2015). Physical facilities in schools refer to the tangible infrastructure and resources that support the educational process. This section discusses availability, adequacy, condition and appropriateness of general physical facilities and infrastructure in a school.

6.2.1 Availability, Adequacy and Condition of School Facilities and Infrastructure.

Well-maintained school facilities and infrastructure are essential in a functional school setup. This section provides analysis of the general infrastructure, facilities and inputs found in a school. The headteachers were asked to indicate the availability, adequacy and condition of specified facilities and infrastructure in the school. The findings are presented in Figure 64.

Figure 64: Availability of School Facilities and Infrastructure.

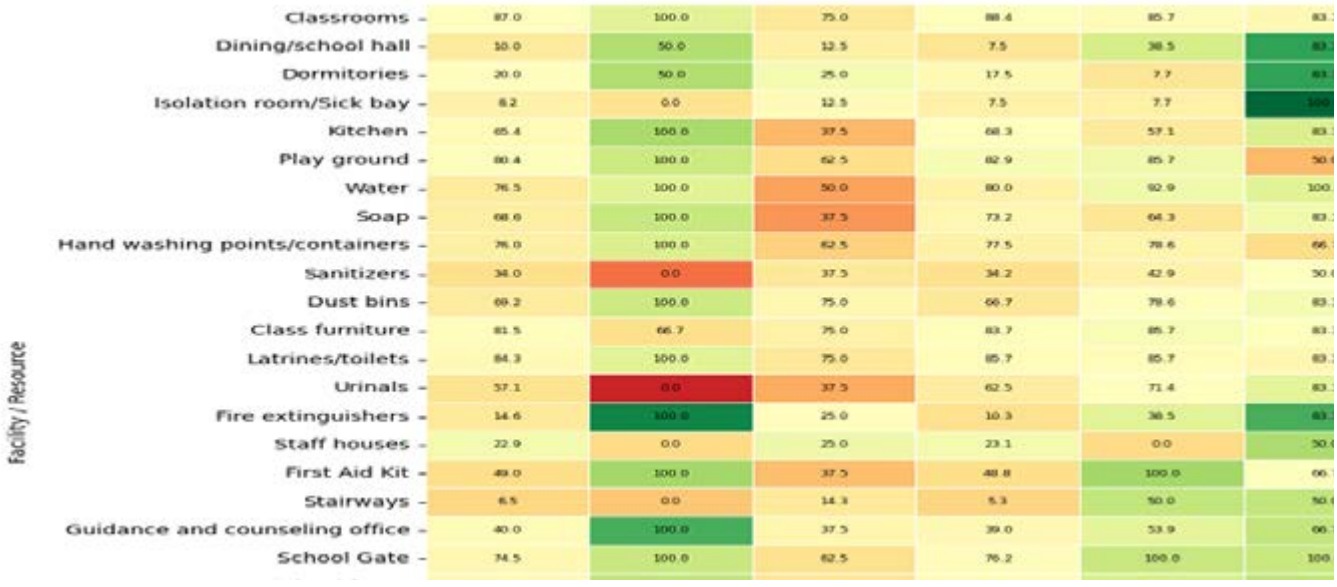


Figure 64 shows that, nationally, latrines/ toilets and learners' classrooms were among the most available school infrastructure as reported by headteachers at 87.3% and 87.1% respectively, while the least available facilities were isolation rooms/sick bays, staff houses and stairways as reported by 15.1%, 18.2%, and 25.8% of headteachers respectively. Among the facilities reported to be most available across all school categories were classrooms and classroom furniture, each being cited by more than 60% of head teachers. Notably, facilities reported to be available were also reported to be adequate and in good condition. The findings seem to suggest that schools in refugee camps had more facilities compared to schools in other categories, with all (100%) headteachers reporting availability of 16 out of the 28 facilities. The facilities include classrooms, playgrounds, guidance and counseling offices, latrines/toilets and computers/laptops among others. On the other hand, lower proportions of headteachers in other school categories (below 50%) reported availability of key facilities. For instance, in refugee host counties, schools in target counties and schools in non refugee host counties reported availability of 18, 11 and 11 out of the 28 facilities respectively. Among the key facilities reported not available included, guidance and counselling office, computer room, library and dining hall. Notably, in non-refugee host counties schools, headteachers reported even lower proportions of facilities such as isolation/sick bays and libraries at 7.5% and 21.1% respectively.

The findings further indicate that while certain facilities such as classroom furniture, classrooms, playfields, and learners' latrines/toilets, were relatively available nationally, their distribution across different categories of schools was uneven. Additionally, the study revealed that the availability and adequacy of key infrastructure such as computer rooms, isolation/sick bays, libraries, and guidance and counseling offices remain limited. These disparities may significantly impact the effective implementation of Competency-Based Education (CBE) by constraining access to essential learning resources and support services. The Registration Guidelines for Basic Education Institutions (MoE, 2021) outlines those facilities such as classrooms, furniture, play fields, and toilets must be available and sufficient as essential requirements.

Further, the study sought to establish availability of kitchen and dining areas in the schools. The study recognizes the significant role the facility plays in schools in relation to promoting health, hygiene, and social interaction among learners. Proper dining facilities ensure food safety and hygiene, reducing the risk of foodborne illnesses (Smith & Brown, 2020). Additionally, shared meal spaces foster social development, encouraging communication and cooperation among students (Jones, 2019). The study established that nationally, the availability of dining areas in schools is notably low at only 22.0%. The schools in targeted counties reported the highest proportion of unavailability of dining areas, at 86.9%, followed by schools in informal settlements at 86.7% and schools in refugee camps at 80.0%.

Whereas kitchens seem to be available across all categories of schools, provision of dining areas was a major challenge except for the special schools which reported availability at 83.3%. Correspondingly less than a third (33.3%) of schools were observed to have dining areas with schools in target counties and informal settlements recording availability at 13.1% and 13.3% respectively. The absence of designated dining areas in schools contravenes the provisions of the Registration Guidelines for Basic Education Institutions (MoE, 2021), which mandate that schools providing meals to learners must allocate a designated dining area.

On availability of designated sick rooms/sanatoriums in the schools, nationally, only 15.8% of schools reported having a designated sickroom/sanatorium. The trend was similar in all other school categories except in special schools (AB) whereby 83.3% of the schools reported availability of a designated sick room. Worth noting is the proportion (100%) of the schools in informal settlements reporting the lack of a designated sickroom, indicating that learners in these settings may be at risk of getting medical attention when need arises. Further, schools play a pivotal role in shaping children's overall well-being, making them one of the most

influential determinants of learners' health (Ran, Chattopadhyay, & Hahn, 2016). The school role goes beyond the provision of education, to include social, emotional as well as health issues (Ofovwe & Ofilli, 2007).

Another key infrastructure of interest to the study was availability of school fences. Figure 64 also shows that, nationally, only 75.3% of schools reported having a fence. Of concern is 24.7% of school that were reported not having a fence. Further analysis shows that, only 44.7% of schools had a barbed wire fence, while 19.8% and 12.2% had live fence and stone type of fence respectively. The low proportion of schools observed to have secure fencing has implications on learner safety, movement within the learning environment, and maintenance of a structured school setting essential for age-appropriate and competency-driven learning. Lack of secure fencing may expose young and vulnerable learners to safety risks, thereby compromising their learning experience and the overall school environment.

6.3 Tuition Infrastructure

The availability and adequacy of tuition infrastructure is fundamental to optimizing teaching and learning processes in schools. The registration guidelines for basic education institutions provide for requisite tuition infrastructure and facilities that enhance curriculum implementation and delivery (MoE, 2021). These facilities contribute to the creation of a dynamic, effective, and supportive educational environment, fostering both learner engagement and instructional effectiveness. It is due to this that the study sought to find out the availability and adequacy of the tuition infrastructure and facilities.

6.3.1 Availability of Tuition infrastructure and facilities

Availability of tuition infrastructure in schools complements education and helps the learners to attain the desired outcomes. The study sought to find out the availability of tuition infrastructure and the results are presented in table 45.

Table 45: Availability of Tuition Facilities

	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee / Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (%)	National (%)
Classrooms	91.9	100.0	88.9	91.7	93.8	100.0	93.7
Space for Agriculture projects	47.3	40.0	37.5	50.0	68.8	66.7	56.5
Science and Technology room	15.0	20.0	11.1	15.2	43.8	33.3	23.9
Art and Craft room	3.5	20.0	11.1	0.0	25.0	16.7	12.6
Computer room	26.7	60.0	22.2	23.9	68.8	100.0	40.0
Home Science room	7.0	20.0	11.1	4.7	25.0	16.7	13.0
Music room	1.8	20.0	0.0	0.0	25.0	16.7	9.1
Agriculture workshop	7.0	40.0	0.0	4.7	13.3	16.7	10.4
Library	27.1	40.0	33.3	24.4	56.3	83.3	35.5
Language room	12.1	20.0	11.1	11.4	20.0	0.0	8.7

Table 45 shows that, nationally, classrooms were the most widely available tuition facilities, observed in

93.7% of schools; however, of concern was the low proportion (below 40%) for 8 out of 10 tuition facilities that were observed to be available. Additionally, the schools in target counties and non-refugee host counties recorded a slightly lower proportion of 91.9% and 88.9% respectively from the national. This implies that schools in these regions may be facing challenges in classroom adequacy, potentially impacting on the overall learning environment and instructional effectiveness. Kitonyi (2013) argues that inadequate classroom, congestion, and other infrastructural challenges have a detrimental impact on learning outcomes, underscoring the critical role of well-equipped tuition facilities in improving educational quality.

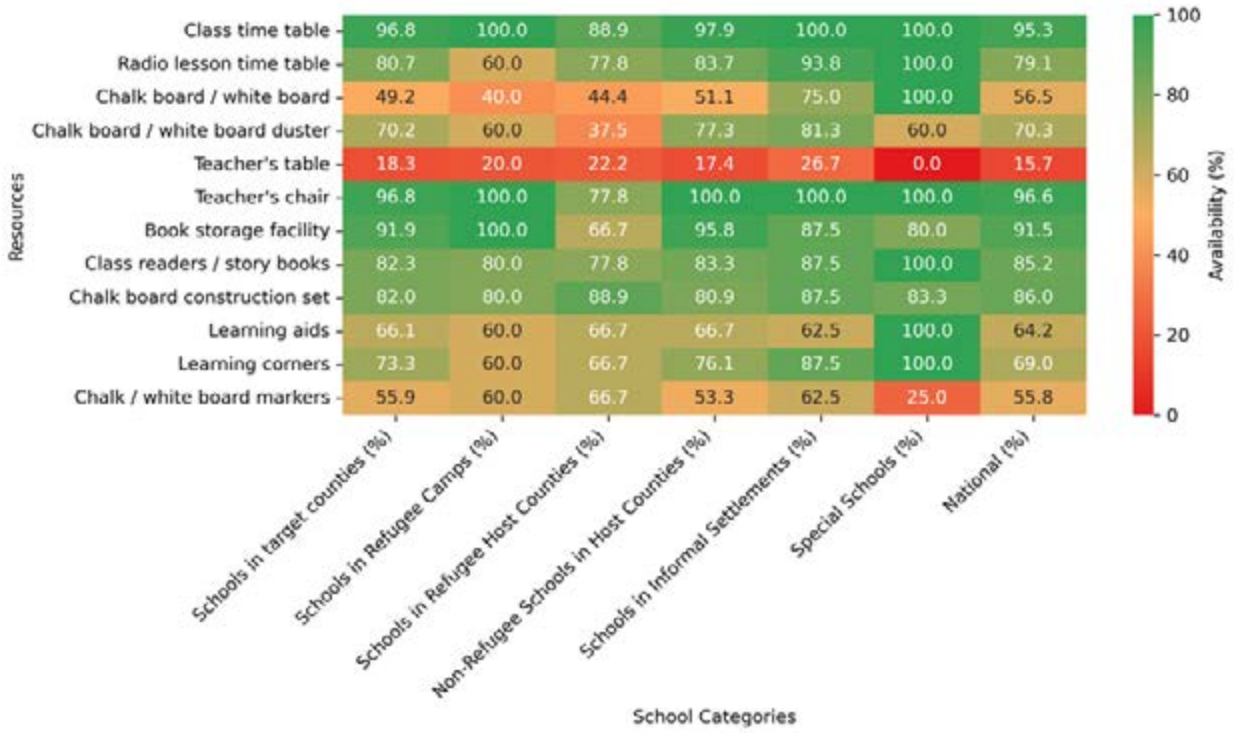
Majority (75%) of schools in all categories faced significant challenges in the availability of specialized learning facilities, such as rooms for language, music, art and craft, and home science, consequently limiting practical instruction, constraining competency development, and adversely affecting learners' holistic skill acquisition. Non-refugee schools in host counties, schools in refugee host counties and schools in target counties were the most affected, lacking rooms for music rooms, art and craft rooms, agriculture workshops, and home science rooms at 1.8%, 3.5%, 7.0% and 7.0% respectively. This highlights critical gaps in infrastructure that may hinder the effective implementation of practical and skill-based learning.

Further analysis established that among the available furniture in tuition rooms, desks were the most available as indicated by 92.3% of the schools. Other furniture observed to be available were tables, chairs, locker, and bench/form as indicated by 86.9%, 63.0% and 55.1% of schools respectively. The findings also indicate that the furniture was age appropriate as observed by schools at 93.4%, 90.5%, 89.8% and 86.1% for desks, locker and chair, table and chair and bench/form respectively. Notably, non refugee schools in host counties, schools in target counties, schools in refugee host counties, and Schools in refugee camps recorded lower proportion of availability of lockers and chairs as reported by 52.2%, 50.0%, 44.4% and 40.0% of schools respectively, proportions which were below the nations at 63.0%. Similarly, schools in target counties and schools in refugee host counties rated below the national (86.9%) on the availability of table and chair at 86.7% and 77.8% respectively. These inadequacies may impact learning conditions, learner engagement, and overall instructional effectiveness.

6.3.2 Inputs in the classroom

The study sought to establish the availability of classroom inputs. Schools were asked to indicate whether the inputs were available or not. The findings are presented in Figure 65.

Figure 65: Inputs Available in the Classroom



Source: *Kenya National Examination Council (2026)*

Figure 65 shows that nationally, the most available inputs reported by 96.6%, 95.3% and 91.5% of schools were teachers' chairs, class timetables and books storage respectively. Teacher tables were the least available inputs in class as rated by 15.7% of schools nationally. Further analysis reveals that schools in refugee host counties and schools in refugee camps fell below the national average in availability of 8 out of 12 key classroom inputs which includes class timetables, radio lesson timetable, chalkboards/whiteboards, chalkboards/whiteboards duster, teachers chair, book storage facilities, class readers/story books and learning corners , indicating challenges in availability of adequate tuition resources. Similarly, low proportions of schools in target counties (49.2%), schools in refugee host counties (44.4%) and schools in refugee camps (40.0%) were observed to have chalkboard/whiteboard while schools in refugee camps recorded lower availability of the same.

Regarding facilities and inputs available to teachers, the study found out that teachers guides were the most available classroom inputs as reported by 97.5% of teachers. Other inputs available in the classroom as indicated by a higher proportion of teachers included pupils desks, textbooks, curriculum designs and functional chalkboards reported by 97.0%, 94.9%, 94.7% and 94.4% respectively. In contrast, less than half (47.6%, 42.9%, 31.1% and 19.1%) of teachers reported availability of maps, computers, internet connection and smartboards nationally.

Other inputs available in the classroom reported by 94.3%, 93.3% and 93.1% of learners included desks, Mathematics textbooks, and English textbooks respectively. A large proportion of learners reported availability of exercise books, pencils and chairs in the classroom at 92.9%, 90.2% and 86.0% respectively. Of concern 38.7% and 35.7% of learners reported unavailability of class readers and tablets in their schools. This limited availability is consistently observed across all categories of schools, suggesting potential constraints in access to essential class readers and tablets. The insufficient provision of these inputs may have implications on instructional effectiveness, learner engagement, and overall academic performance, particularly in

contexts where digital and print learning materials play a critical role in enhancing comprehension and skill development.

6.4 Administrative Infrastructure

Administrative facilities in a school play a crucial role in ensuring the smooth functioning of the institution. A well-equipped administration block is important for effective management and discharge of administrative functions in a school. This study sought to establish the availability, adequacy and maintenance of various administrative facilities in schools.

6.4.1. Availability and Adequacy of Administrative Facilities

Availability and adequacy of administrative infrastructure in a school contribute to organization, efficiency, and the overall quality of education by managing essential operations behind the scenes. Various administrative facilities were observed in schools. The findings are presented in Table 46

Table 46: Availability and Adequacy of Administrative Facilities

Items	Schools in target counties (%)		Schools in Refugee Camps (%)		Schools in Refugee Host Counties (%)		Non-Refugee Schools in Host Counties(%)		Schools in Informal Settlements (%)		Special Schools (%)		National (%)	
	Availability	Adequacy	Availability	Adequacy	Availability	Adequacy	Availability	Adequacy	Availability	Adequacy	Availability	Adequacy	Availability	Adequacy
Head teachers office	91.9	63.2	100	80	77.8	71.4	93.8	60	100	80	100	83.3	95.4	72.7
Deputy head teachers' office	71	65.1	80	75	66.7	80	70.8	61.8	87.5	76.9	100	83.3	79.1	72.6
Senior teachers' office	33.9	71.4	60	66.7	44.4	75	28.9	71.4	68.8	100	100	83.3	51.7	80
Staffroom	83.9	63.5	100	80	66.7	83.3	85.4	58.5	87.5	76.9	100	66.7	86.3	69.1
Guidance and counselling	29.3	64.7	100	80	22.2	0	22.7	70	56.3	88.9	66.7	100	42.1	77.8
Other	19.4	40	33.3	0	0	0	20.8	44.4	14.3	66.7	25	50	17.5	47.6

Table 46 shows that, nationally, the majority of schools indicated that the headteacher office, staffroom and deputy-headteacher's offices were available in their schools at 95.4%, 86.3%, and 79.1% respectively. Other facilities that were available included senior teachers' offices and guidance and counselling rooms as recorded by 51.7% and 42.1% of schools respectively. Notably, a lower proportion of schools reported adequacy of key administrative facilities compared to their national availability. For instance, headteachers, deputy headteacher offices and staff rooms were rated to be adequate by 72.7%, 72.6% and 69.1% of schools, compared to 95.4%, 79.1% and 86.3% of schools that rated the same facilities as available. This suggests that the available facilities were not adequate for effective management of schools.

Notably, the findings indicate that all categories of schools face challenges in the provision of vari-

ous administrative facilities. For instance, schools in refugee host counties recorded even lower proportions on availability of headteacher, deputy headteacher, staffroom and senior teacher offices at 77.8%, 66.7%, 66.7% and 44.4% compared to the nationals at 95.4%, 79.1%, 86.3% and 51.7% respectively. The absence of designated offices for the headteacher and deputy headteacher significantly impacts the efficiency of school administration, disrupts the smooth functioning of institutional operations, and hinders the creation of a conducive learning environment. This deficiency may, in turn, affect the enforcement of academic and disciplinary standards, ultimately influencing learners' academic outcomes.

On availability of guidance and counseling rooms, schools in refugee-host counties, non-refugee schools in host counties, and schools in target counties reported the presence of this facility at 22.2%, 22.7%, and 29.3%, respectively, compared to the national rate of 42.1%. This unequal access to guidance and counseling rooms highlights a significant gap in the implementation of guidance and counseling programmes within these schools and may undermine the effectiveness of learner support services. Designated guidance and counselling rooms in schools has a bearing on learner achievement since it greatly enhances learners' performance by offering a safe, confidential space for emotional, academic, and behavioural support.

6.5 Learning and Instruction Materials in School

The government has made significant investment towards ensuring adequate books for learners in all public primary and junior schools since the inception of Free Primary Education in Kenya in 2003, According to Kenya Basic Education Statistical Booklet (MoE, 2020), the provision of education is highly influenced by the presence of learning and instruction materials. This section covers the availability of textbooks, supplementary textbooks, supplementary instruction materials, writing materials, library/book corner and learning resource centre. The National Education Quality Assurance and Standard Framework (MoE, 2021), provides for adequate provision of learning resources for the achievement of expected learning outcomes.

6.5.1. Ratio of Books among Learners

The instructional material policy, 2018 as revised in 2019 recognizes the importance of providing textbooks to a ratio of 1:1 (MoE 2019). This study sought information on the ratio of course books for English and Mathematics among learners in Grade 3. The data was summarised in Table 47

Table 47: Learner-book Ratio

Ratio	Schools in target counties (%)		Schools in Refugee Camps (%)		Schools in Refugee Host Counties (%)		Non-Refugee Schools in Host Counties (%)		Schools in Informal Settlements (%)		Special Schools (%)		Nation
	Mathematics	English	Mathematics	English	Mathematics	English	Mathematics	English	Mathematics	English	Mathematics	English	Mathematics
1 per book	30	32.3	40	40	33.3	33.3	28.3	31.3	20	20	50	50	30.8
2 per book	20	21	0	0	33.3	33.3	19.6	20.8	46.7	40	33.3	33.3	26.9
3 per book	37.7	29	20	20	22.2	11.1	34.8	33.3	20	20	0	0	23.1
4 per book	3.3	6.5	0	0	11.1	22.2	2.2	4.2	6.7	13.3	0	0	6.8
5 per book	3.3	1.6	0	0	0	0	4.4	2.1	0	0	0	0	2.6
6 and above	3.3	3.2	20	20	0	0	2.2	2.1	0	0	0	0	4.3
Not available	8.3	6.5	20	20	0	0	8.7	6.3	6.7	6.7	16.7	16.7	5.6

Nationally as indicated in Table 47, 34.2% and 30.8% of schools were observed to have 1:1 learner-book ratio in English and Mathematics respectively. A much lower proportion of schools (24.9% and 26.9%) were observed to have 1:2 learner book ratio in English and Mathematics respectively. A further analysis nationally, indicated 83.2% and 80.8% of schools were observed to have a book ratio of between 1:1 to 1: 3 ratio in English and Mathematics implying a fair access to key textbooks. Of concern is 4.6% and 5.6% of schools observed as having no textbooks for English and Mathematics respectively. On the other hand, half (50%) of the special schools were observed to have 1:1 learner-book ratio in Mathematics and English which was higher proportion compared to schools in refugee camps and schools in host counties that were observed to have a learner-book ratio of 40.0% and 33.3% respectively. However, a good proportion 46.7% and 40.0% of schools in informal settlements were observed to have a 1:2 learner-book ratio in Mathematics and English respectively, while slightly more than a third (33.3%) of special schools and schools in refugee host counties were observed to have a 1.2 learner-book ratio in both English and Mathematics. Of concern is that 20% of schools in refugee camps were observed to have no books in both subjects, while a similar proportion (20%) recorded a book ratio of 1:6. The lack of books and the high sharing ratio may deny learners opportunities to develop foundational literacy and numeracy skills, thereby undermining the achievement of learning outcomes. According to Kamoet and Mbirithi (2024), adequate learner–textbook ratio and resource allocation are linked to improved learner performance.

6.5.2. Availability and Issuance of Supplementary Textbooks

Supplementary books are critical in teaching and learning as they provide additional explanations and exercises to reinforce what is taught in course textbooks. They foster a love for reading and improve literacy skills while offering practical applications of concepts designed to make learning more engaging. This study sought to find out the

nal (%)	
	En-glish
	34.2
	24.9
	24.1
	7.2
	2.1
	3
	4.6

availability and issuance of supplementary books in English and Mathematics. The data obtained was summarised and presented in Table 48.

Table 48: Availability and Issuance of Supplementary Textbooks

Items	Schools in target counties (%)		Schools in Refugee Camps (%)		Schools in Refugee Host Counties (%)		Non-Refugee Schools in Host Counties (%)		Schools in Informal Settlements (%)		Special Schools (%)		National (%)	
		Is-		Is-		Is-		Is-		Is-		Is-		Is-
English	78.3		60	60	66.7		82.6		87.5		100		70.2	
Mathematics	73.3		60	60	55.6		78.3		81.3		83.3		67.7	

Nationally, as depicted in Table 48 it was observed that 70.2% and 67.7% of schools recorded availad that nationally, lunch was the most common meal provided in schools, with 63.9% of schools offering it. A similar trend is reflected across all school categories, with special schools, schools in refugee host counties and schools in refugee camps reporting offering lunch at 100%, 77.8%, 71.4% respectively. Worth noting is that all (100%) of Special schools reported availability of breakfast, Lunch and supper. SDG goal 4 intends to ensure inclusive and equitable quality education and promote life-long learning opportunities for all. The target is that by 2030, all children should have an opportunity to receive a safe, healthy, nutritious meal in schools. Of concern is the proportion of schools in informal settlement reporting not having breakfast and super their learners. Low proportions (53.9%) of schools in the informal settlement compared to other categories of schools

The study further sought to establish the modalities employed by schools in the provision of meals. It was established that the most common modality used by schools in the provision of meals was centralized school meals as indicated by 82.8% of schools. The highest proportion of schools adapting this modality included schools in refugee camps, schools in target counties and schools in refugee host counties at 100%, 90.9% and 90.2% respectively. Other modalities included packing meals from homes which was reported to be used by schools in informal settlements and schools in non-refugee host counties at 50% and 26.3% respectively. Kamau, Wanjohi, and Raburu (2024) pointed out that establishing clear modalities for the provision of school meals in primary schools is crucial for ensuring consistency, efficiency, and sustainability in feeding programmes. They further noted that a centralized meal provision ensures standardized nutrition, reduces procurement costs through bulk purchasing, and streamlines distribution, benefiting food-insecure regions.

On sustainability of food provision in schools. 40.1% of learners' reported that food consumed at school is sourced from their homes, while 36.2% indicated that their meals were sourced from their school. More than a half of learners in special schools and schools in refugee camps reported that the food they eat while at school was sourced at school at 76.9% and 57.9% respectively. Food obtained from a centralised source ensures standardised quality, nutrition and hygiene/safety. According to the findings of this study, there is evidence of diverse sources of meal

Table 48: *Availability and Issuance of Supplementary Textbooks*

Items	Schools in target counties (%)		Schools in Refugee Camps (%)		Schools in Refugee Host Counties (%)		Non-Refugee Schools in Host Counties (%)		Schools in Informal Settlements (%)		Special Schools (%)		National (%)	
	Availability	Issued	Availability	Issued	Availability	Issued	Availability	Issued	Availability	Issued	Availability	Issued	Availability	Issued
English	78.3	76.7	60	60	66.7	66.7	82.6	80.4	87.5	93.3	100	83.3	70.2	66.1
Mathematics	73.3	71.7	60	60	55.6	55.6	78.3	76.1	81.3	86.7	83.3	66.7	67.7	62.7

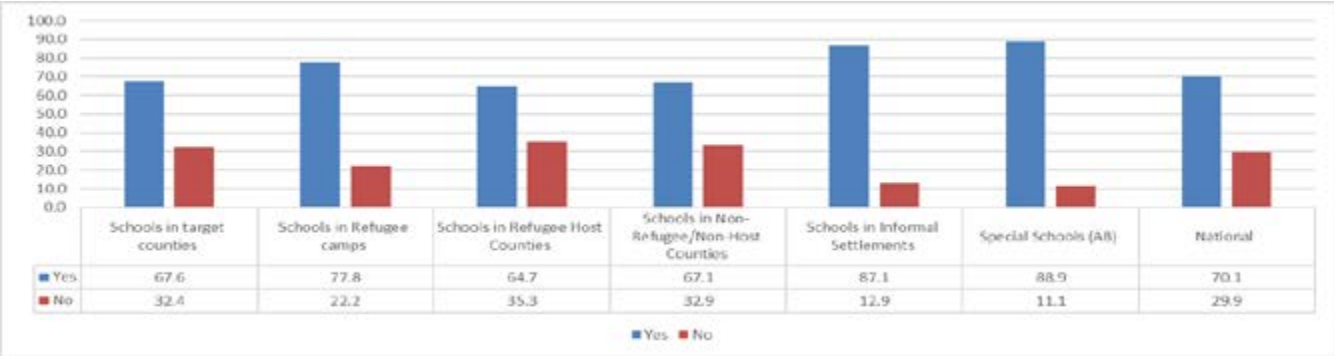
Nationally, as depicted in Table 48 it was observed that 70.2% and 67.7% of schools recorded availability of English and Mathematics supplementary textbooks respectively. It was also observed that all (100%) special schools recorded availability of English supplementary books while the informal settlements and schools in target counties observed 87.5% and 78.3% respectively. The schools in refugee camps and schools in refugee host counties seem to experience challenges with the availability of both English and Mathematics supplementary books as observed by 60% and 66.7% for English and 55.6% and 60.0% for Mathematics respectively, proportions that were way below the nationals. This implies that the schools had a challenge in terms of accessing supplementary books to the respective subjects.

The disparity between the availability and issuance of supplementary books in schools presents a critical gap in resource utilization. Worth noting is that schools in informal settlements appeared to have issued more of available supplementary English and Mathematics books compared to any categories of schools at 93.3% and 86.7% respectively. Conversely, 100% and 83.3% of special schools recorded availability of both English and Mathematics supplementary books while only 83.3% and 66.7% of schools recorded to have issued the books. This implies that although supplementary books were fairly available in some schools, they were not issued for learners' use. This discrepancy indicates potential challenges in book distribution, accessibility, or institutional policies that may hinder effective utilization of available supplementary books.

6.5.3 Access to Supplementary Instructional Materials by Schools

Instructional materials are key to learning especially in lower grades. Teachers are required to have supplementary instructional materials to enrich the lesson and enable learner engagement, understanding and retention. Teachers were asked to indicate whether they had access to supplementary instructional materials and their responses are presented in Figure 66.

Figure 66: *Access to Supplementary Materials by Teachers*



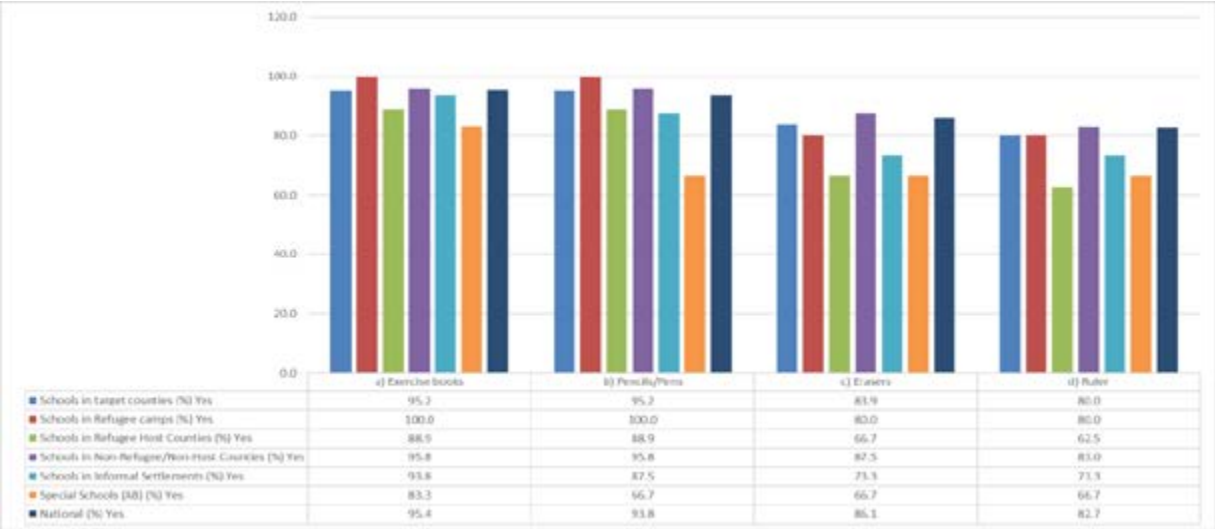
Source: *Kenya National Examination Council (2026)*

Nationally, Figure 66 shows that supplementary materials are accessible as reported by 70.1% of teachers. Teachers in special schools, schools in informal settlements and schools in refugee camps had a higher accessibility to supplementary materials as reported by 88.9%, 87.1% and 77.8% respectively, compared to schools in refugee host counties, schools in non-refugee host counties, and schools in target counties which reported a lower proportion at 64.7%, 67.1% and 67.6% respectively. This suggests that teachers in these specific school categories face greater challenges in accessing supplementary materials.

6.5.4 Availability of Essential Writing Materials

Meaningful learning takes place when learners have access to essential writing materials in the form of exercise books, pencils/pens, erasers and rulers among others. This study sought to establish the availability of essential writing materials in various categories of schools. The information obtained is summarised in Figure 67.

Figure 67: *Availability of Essential Learning Materials.*



	a) Exercise books	b) Pencils/Pens	c) Erasers	d) Ruler
Schools in target counties (%) Yes	95.2	95.2	83.9	80.0
Schools in Refugee camps (%) Yes	100.0	100.0	80.0	80.0
Schools in Refugee Host Counties (%) Yes	88.9	88.9	66.7	62.5
Schools in Non-Refugee/Non-Host Counties (%) Yes	95.8	95.8	87.5	83.0
Schools in Informal Settlements (%) Yes	93.8	87.5	73.3	73.3
Special Schools (All) (%) Yes	83.3	66.7	66.7	66.7
National (%) Yes	95.4	93.8	86.1	82.7

Nationally, as shown in Figure 67, availability of essential learning materials (exercise books, pencils/pens, erasers and ruler) was high across all school categories at 82.7% and above. Exercise books registered the highest availability at 95.4% followed by pencils/pens at 93.8%. Schools in refugee camps reported the highest proportion of availability of learners' exercise books and pencils/pens at 100%. Special schools reported the lowest proportion of availability of exercise books and pencils/pens at 88.3% and 66.7% respectively compared to other categories of schools. Generally, all essential learning materials were adequately available across all categories of schools (over 60%). The availability of essential learning materials is fundamental to quality education as the materials play a crucial role in enhancing the learning experience.

6.5.5. Availability of Library/Book Corner in School

Various studies underscore the need for increased investment in school libraries to support literacy development at the primary and elementary level (Mahendra et al., 2024; Salubi & Majavu, 2024). School libraries are essential for fostering academic growth, developing literacy, enhancing research skills, and promoting a culture of learning and collaboration. It serves as both a knowledge hub and a place for personal and intellectual development. The Ministry of Education registration guidelines for basic education institutions require that schools should have a library (MoE, 2021).

Based on this, learners in Grade 3 were asked to indicate whether their school had a library or a book corner**.** The findings are presented in Figure 68.

Figure 68: *Availability of Library/book Corner*

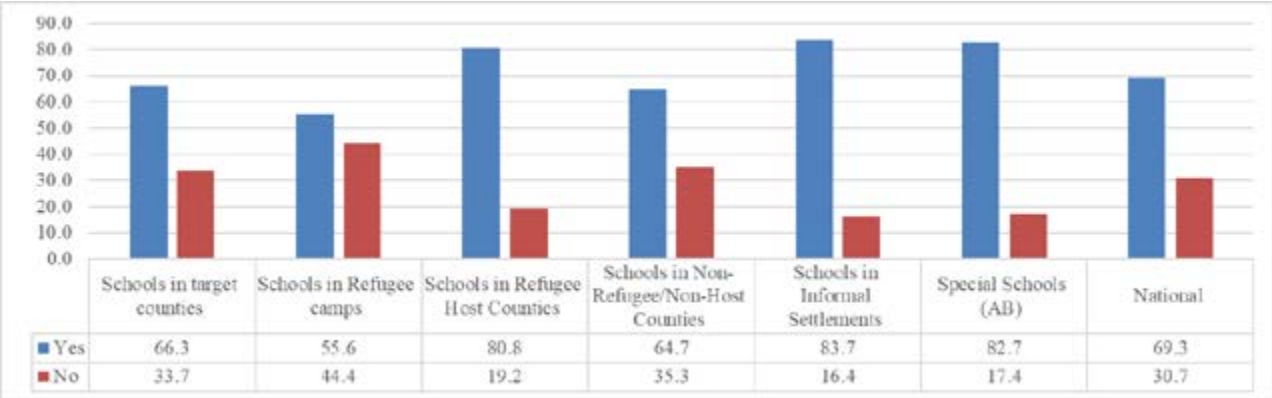


Figure 68 shows that nationally, a good proportion of learners reported having a library/book corner at 69.3%. Majority of learners in schools in informal settlements and special schools reported the availability of libraries and book corners at 83.7% and 82.7% respectively, while a relatively lower proportion of learners in schools in refugee camps and schools in target counties reported availability of libraries and book corners at 55.6% and 66.3% respectively. Notably, over half (55%) of learners across all categories indicated they had access to a library or book corner, which may positively influence learner achievement by promoting reading habits and independent learning.

6.5.6 Availability of learning resource centre

Availability of a Learning Resource Centre either in a school or within the proximity zone of the school provides opportunity for teachers and learners to access additional materials and resources necessary to enhance teaching and learning. The study sought to find out if there is a learning resource centre within the school locality. The teachers' responses on availability of learning resource centre were analyzed and presented in Figure 69

Figure 69: *Availability of Learning Resource Centre Within the School*

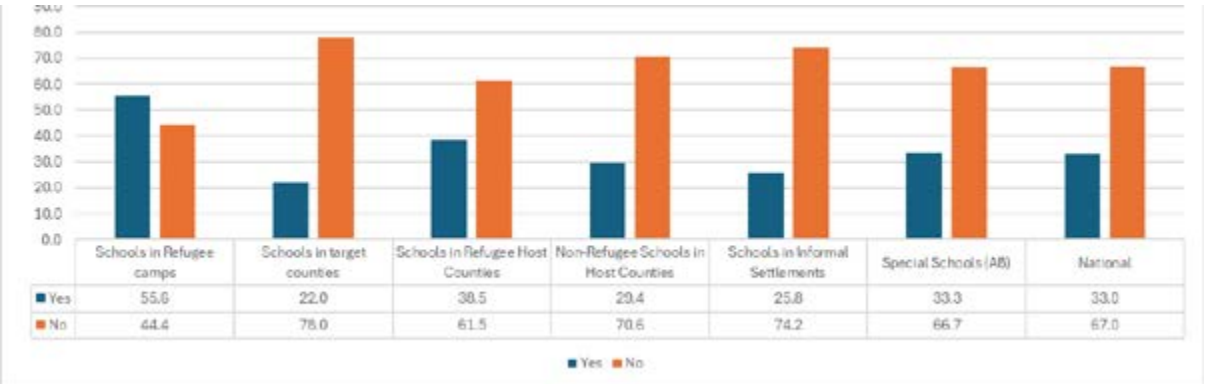
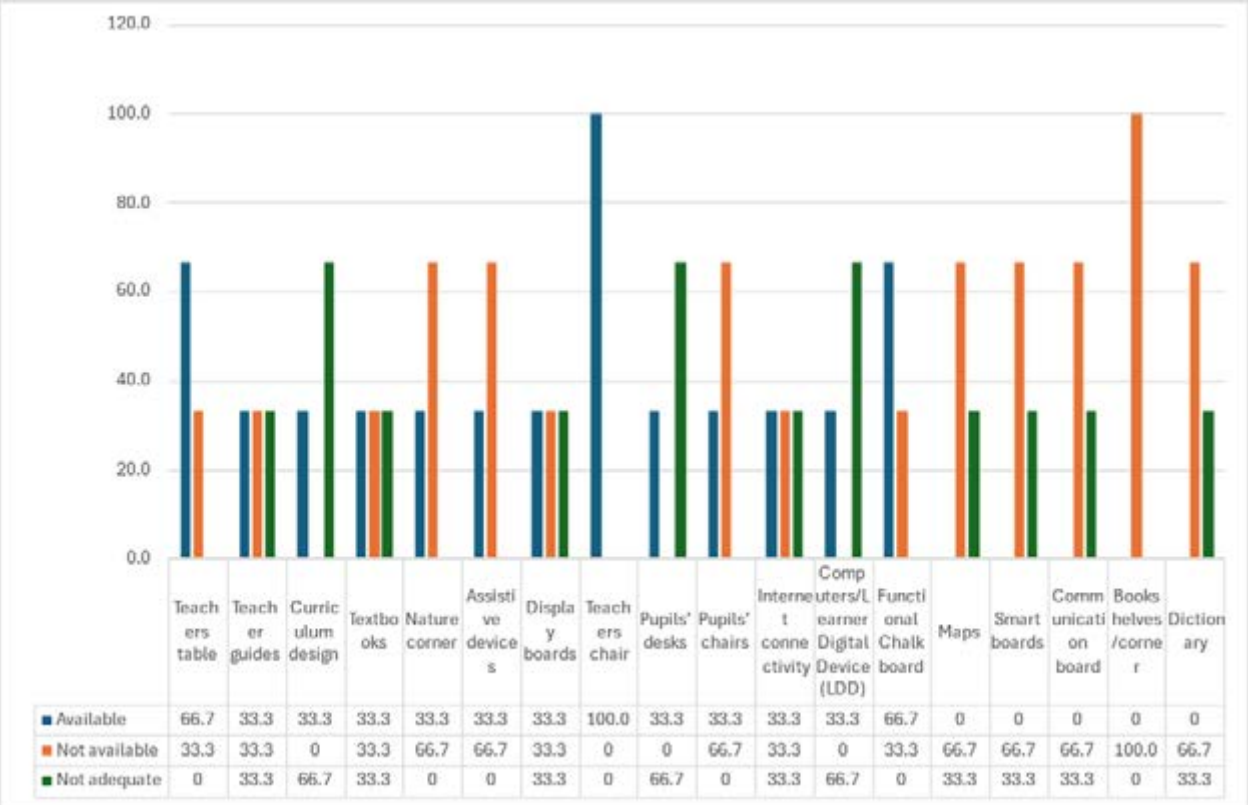


Figure 69 shows that nationally, the learning resource centres were scarcely available with only 33% of the teachers reporting availability. The responses were similar across all categories of schools. Of concern is the higher proportion of teachers in schools in the target counties, schools in informal settlements and schools in non refugee host counties reporting the highest percentage of unavailability of learning resource centers at 78%, 74.2 % and 70.6% respectively. Rahmat et al. (2023) affirmed that learning resource centres can help facilitate the learning process by providing accessible learning resources for free. The analysis indicates that generally, learning resource centres were scantly available within the proximity of the schools across all categories.

6.5.7 Availability and adequacy of learning materials for Stage Based Curriculum

Learning resources play a significant role in curriculum implementation. The study sought to establish the availability and adequacy of selected learning resources in the schools following stage-based curriculum. The findings are presented in Figure 70.

Figure 70: *Availability and Adequacy of Learning Resources*



	Teachers table	Teacher guides	Curriculum design	Textbooks	Nature corner	Assistive devices	Display boards	Teachers chair	Pupils' desks	Pupils' chairs	Internet connectivity	Computers/Learner Digital Device (LDD)	Functional Chalk board	Maps	Smart boards	Communication board	Books helves/corner	Dictionary
Available	66.7	33.3	33.3	33.3	33.3	33.3	33.3	100.0	33.3	33.3	33.3	33.3	66.7	0	0	0	0	0
Not available	33.3	33.3	0	33.3	66.7	66.7	33.3	0	0	66.7	33.3	0	33.3	66.7	66.7	66.7	100.0	66.7
Not adequate	0	33.3	66.7	33.3	0	0	33.3	0	66.7	0	33.3	66.7	0	33.3	33.3	33.3	0	33.3

Figure 70, shows that a good proportion of teachers reported availability of most of the resources such as teacher chairs, teachers' tables, and functional chalkboards at 100%, 66.7%, and 66.7% respectively. Of concern is the high proportion of teachers who reported unavailability of maps

(66.7%), smartboards (66.7%), communication boards (66.7%), bookshelves/corners (100%), dictionaries (66.7%), assistive devices (66.7%), and pupils' chairs (66.7%). The figure also shows among the resources that were reported not adequate include curriculum designs, pupils' desks, computers, and learners' digital devices, each reported by 66.7% teachers.

These deficiencies in essential learning resources may adversely affect instructional delivery, learner engagement, and overall academic performance of learners following stage-based curriculum. Inadequate provision of these resources poses a significant challenge to the implementation of the stage-based curriculum as per the Competency-Based Education(CBE), which require differentiated instructional materials, inclusive learning environments, and learner-centred approaches to meet the diverse needs and abilities of all learners.

6.6 Information and Communication Technology Infrastructure and Facilities

The National Education Sector Strategic Plan (NESSP), 2018-2022, recognizes Information and Communication Technology (ICT) as a key priority in achieving Sustainable Development Goal (SDG) 4. Consequently, ICT has been integrated into both curriculum delivery and education management which necessitates availability of ICT infrastructure. Moreover, digital literacy is one of the Core Competencies in Competency-Based Curriculum thus the need for availability and adequacy of ICT facilities.

6.6.1 Availability and adequacy of ICT facilities in the school

The availability and adequacy of ICT facilities in schools is a multifaceted issue that affects teaching quality, student engagement, and overall learning outcomes. Figure 71 presents analysis on the response on availability and adequacy of ICT facilities in the various categories of schools surveyed.

Figure 71: *Availability of ICT Facilities in Schools*

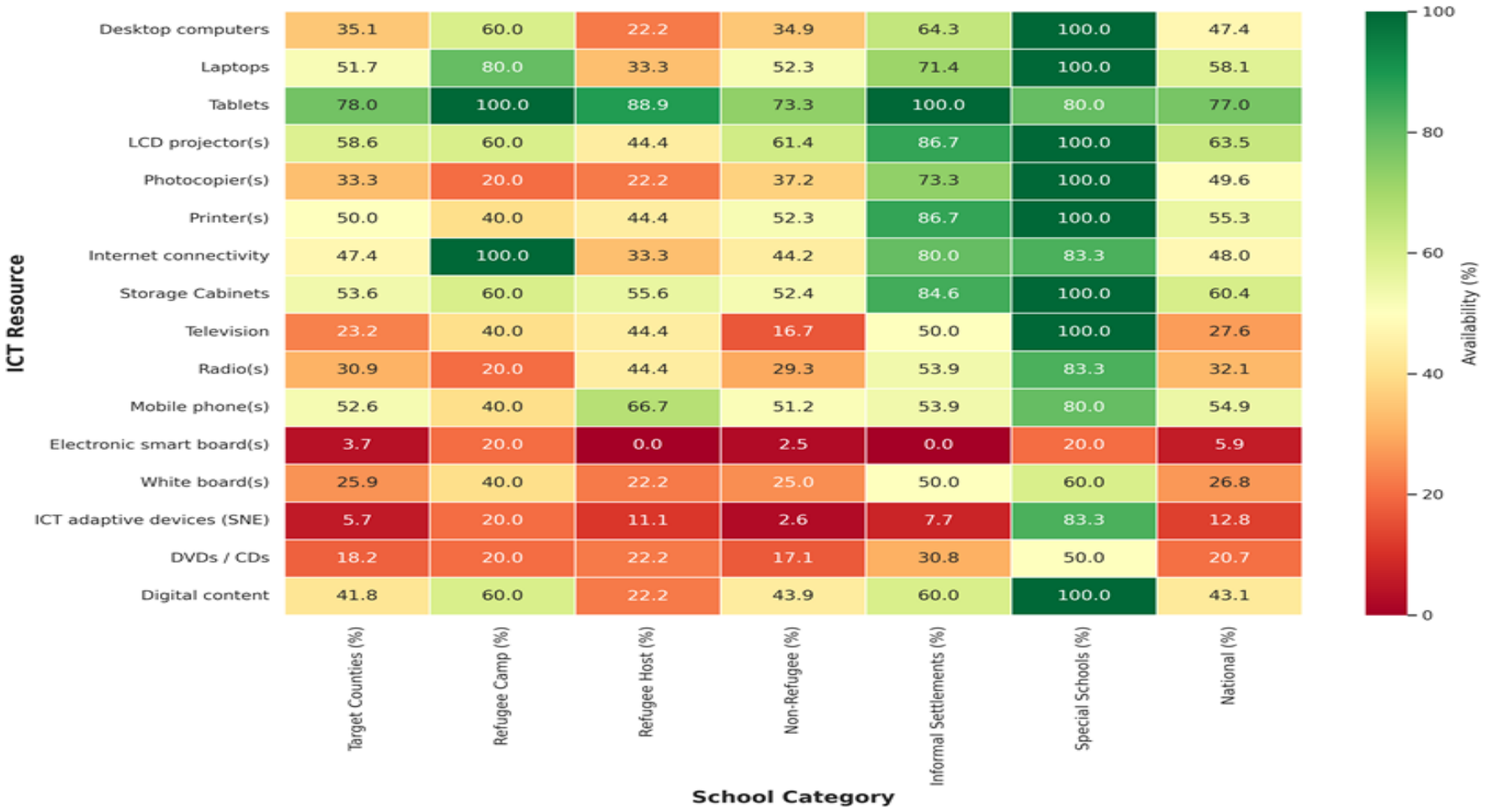


Figure 71 shows that, nationally, the ICT facilities that were observed to be most available were tablets, LCD projectors, cabinets for storage of computer items, and laptops, as recorded by 77.0%, 63.5%, 60.4%, and 58.1% of schools respectively. Worth noting is the availability of tablets which were observed to be available in schools in refugee camps, schools in target counties, and special schools, at 100%, 86.4%, and 64.7% respectively. This could be attributed to government and non-governmental organisations' initiatives that focus on providing ICT devices to public and private schools in Kenya. On the other hand, nationally, a lower proportion of schools recorded the availability of essential ICT facilities such as electronic smart boards, ICT adaptive devices for learners with Special Needs Education (SNE), televisions, and radios at 5.9%, 12.8%, 27.6%, and 32.1% respectively.

Further analysis indicates that out of the 16 ICT facilities, 13 were reported to be adequate by less than half (50%) of the schools nationally as follows; cabinets for storage of computer items (46.7%), tablets (44.6%) , LCD projectors (38.5%)and laptops (27.5%). More so, schools in target counties and refugee camps also reported low proportions of television availability, at 33.0% and 44.4% respectively. Furthermore, the availability of cameras in schools was observed to be low, with only 13.3% of headteachers reporting availability. This indicates a significant gap in ICT readiness, which could have a bearing on the implementation of CBC.

These findings have important implications for the successful implementation of CBC digital literacy components. These deficiencies present considerable barriers to effective integration of digital learning, potentially limiting the adoption of technology-enhanced pedagogies and equitable access to digital education resources. The limited availability and inadequacy of ICT resources may restrict learners' opportunities to develop essential 21st-century skills and full realization of CBC's digital literacy objectives.

Further investigation on the condition of ICT facilities observed that nationally, the ICT facilities were well maintained. This was evidenced by 85.0%, 83.0%, 84.8%, and 81.8% of schools who observed that their printers, photocopiers, desktop computers and television sets were well maintained. However, other categories of school except special schools were observed to have challenges with maintenance at below 75%.

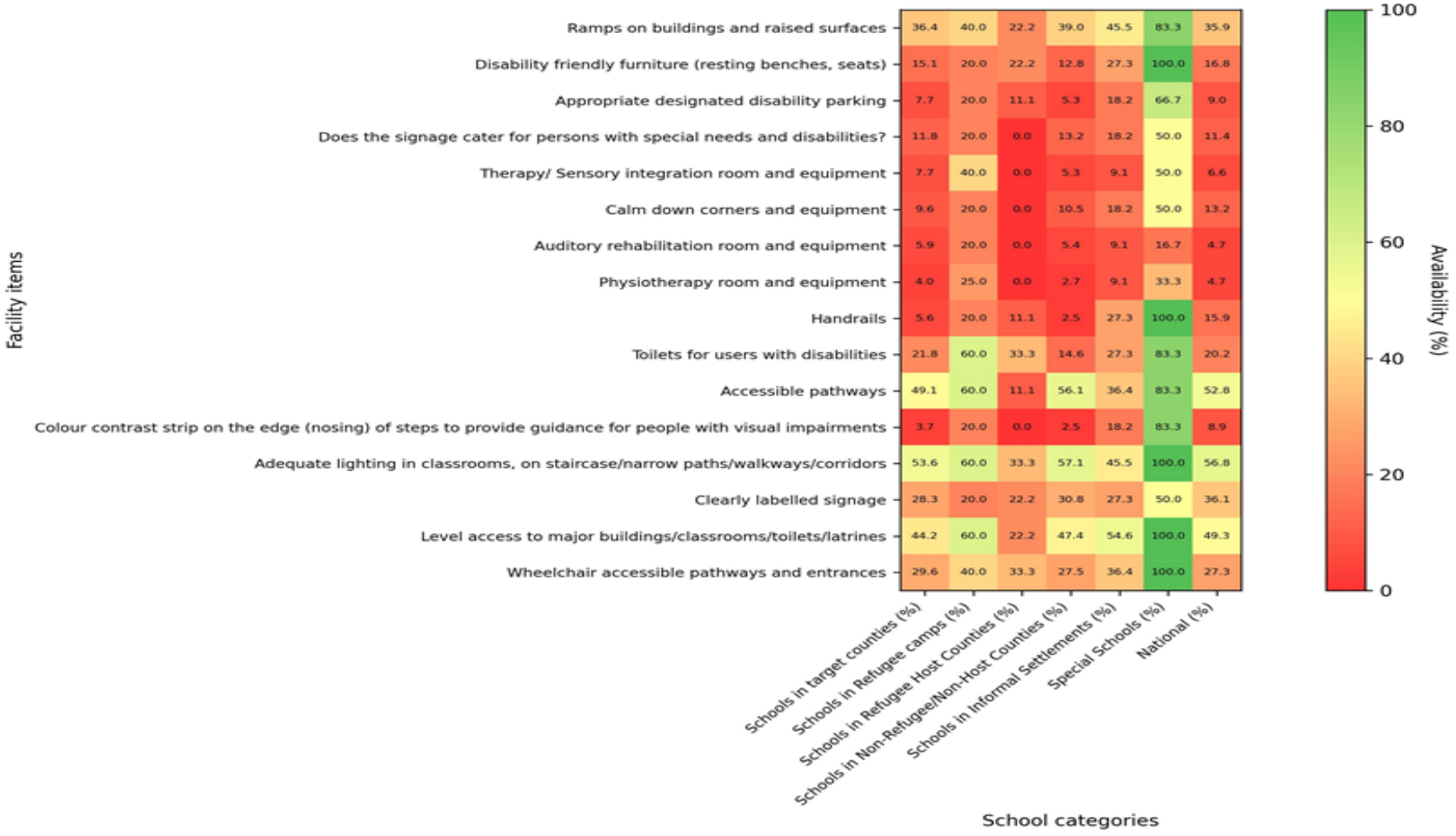
6.7 Facilities and Infrastructure for Special Needs Education

Facilities for learners with disabilities or special needs are essential in creating an inclusive, supportive, and conducive learning environment. Article 54 of the Constitution of Kenya (2010) affirms the right of persons with disabilities to access educational institutions and facilities that are responsive to their specific needs. Adapting school environments to accommodate learners with special needs and disabilities in primary schools not only promotes inclusive education, but also ensures equal opportunities, dignity, and personalized support for all learners.

6.7.1 Availability of Facilities for Learners with Disabilities and Special needs in schools

The availability of facilities for learners with disabilities and Special Needs (SN) is crucial to ensure inclusive and equitable learning environments. Figure 72 presents findings on availability of facilities for learners with special needs and disability in schools.

Figure 72: *Availability of Facilities for Learners with Special Needs and Disability.*



From Figure 72, nationally it was observable that classroom and accessible pathway had adequate lighting as recorded by 56.8% and 52.8% of schools respectively. The least available facilities were auditory rehabilitation rooms and equipment and physiotherapy rooms and equipment as observed in only 4.7% of schools nationally. Notably, special schools experienced fewer challenges in the provision of key facilities as observed by 66.7% of the schools recording availability of 10 out of 16 disability-related facilities including ramps, wheelchair-accessible pathways, disability-friendly furniture, handrails, and adapted toilets. On the other hand a critical shortfall in the availability of essential accessibility facilities to support learners with disabilities in schools such as therapy/sensory integration room and equipment (6.6%), color contrast strips for learners with visual impairment (8.9%), and designated disability (9.0%) was observed. These deficiencies indicate significant barriers to inclusivity, potentially limiting the participation, mobility, and overall learning experience of learners with disabilities which may compromise the effectiveness of inclusive education policies.

Further analysis reveals that schools continue to face significant challenges in provision of adapted facilities and resources such as special diets, assistive devices, and adjusted classroom seating arrangements for learners with disabilities. Worth noting is that none of the headteachers in refugee camp schools and schools located in informal settlements reported the availability of a special diet. Moreover, only a very small proportion of headteachers (below 6%) reported such provisions across other school settings. Nationally, the availability of adapted facilities also remained low, with only 31.3% of headteachers reporting the presence of adjusted classroom seating, and just 5.4% indicating the availability of assistive devices.

A further investigation on availability and adequacy of environmental adaptation facilities/resources, indicates a low proportion of schools reporting availability and adequacy of environmental adaptation facilities/resources. For instance, nationally, only 36.6% of schools had adopted staff toilets. Other environmental adaptation facilities reported to be available in schools included the use of bright colours for learners with low vision, lighting in classrooms, and adopted chair desks, stools, and benches at 29.1%, 28.2%, and 22.4% respectively. The same trend is reflected across the categories of schools, with a relatively higher proportion of special schools (66.7%) reporting availability of adopted staff toilets, accessible pathways, lighting in classrooms, and use of bright colours for learners with low vision respectively. On the other hand, schools in refugee camps reported no environmental adaptation facilities.

Further, adaptations of the classroom environment such as desks near chalk /white board, SNE learners interacting with others and availing adequate spacing in the classroom were observed to be low at 35.5%, 24.3% and 20.3% nationally. The low proportion of schools indicating availability of adaptations of the classroom environment may pose a challenge adopting the inclusive education policy. This limited availability and adequacy of environmental adaptation facilities could have a critical implication on the effective implementation of the Competency-Based Curriculum (CBC), which emphasizes inclusivity and learner-centred approaches. Inadequate environmental adaptations may hinder the full participation of learners with disabilities in learning thereby undermining equity and access in education.

6.7.2 Availability, Adequacy and usability of Assistive Devices

Assistive devices are critical for learners with disabilities as they help bridge learning gaps, foster independence and promote inclusivity. The devices play a pivotal role in fostering a more inclusive, supportive, and effective learning environment for learners with special needs and disabilities hence ensuring inclusive and equitable education in line with Sustainable Development Goal No 4.

In this study, schools were asked to indicate the availability and adequacy of assistive devices, teaching and learning resources for learners with special need and disabilities. The findings are presented in Figure 73.

Figure 73: *Availability of Assistive Devices and Teaching and Learning Resources*

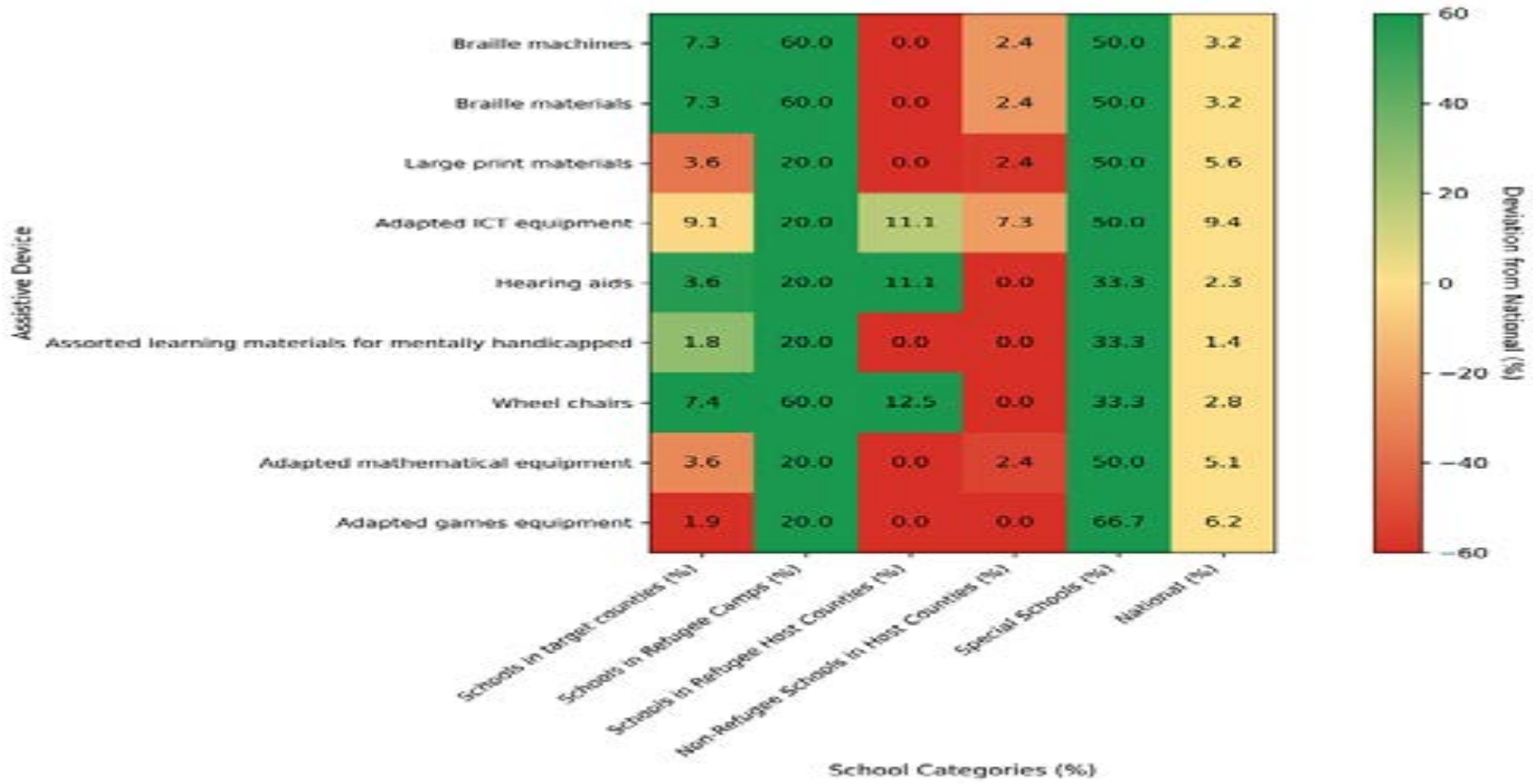


Figure 73 shows that nationally, low proportions of schools recorded availability of assistive devices and teaching and learning resources with the highest being adopted ICT equipment at 9.4%. The highest in terms of adequacy was adopted mathematical equipment recorded at 72.7% nationally.

Of concern is the limited availability of essential assistive devices and learning resources in special schools. Specifically, only 33.3% of schools reported having hearing aids, assorted learning materials for learners with mental disabilities, and wheelchairs. This inadequacy suggests significant gaps in the provision of critical support systems necessary for facilitating inclusive education. The limited access to these resources may hinder the effective participation and learning outcomes of students with disabilities, highlighting the urgent need for targeted interventions to enhance accessibility and ensure equitable learning opportunities for all learners in special education settings

Regarding usability, the study established that nationally, the usability of the assistive devices and teaching and learning resources was rated high by more than 60% of schools. A higher proportion of schools reported the usability of large print, adapted mathematical equipment, braille machines and braille materials at 90%, 72.7%, and 71.4% respectively. Schools in both refugee-host counties and refugee/non-host counties demonstrated minimal utilization of critical assistive devices and teaching and learning resources, with each category reporting non-utilization of 7 out of the 9 facilities assessed. This significant gap in resource utilization is likely to have adverse implications on, as access to special need learners in those categories of schools.

6.8 Essential Services Facilities (water, power, sanitation, meals and recreation)

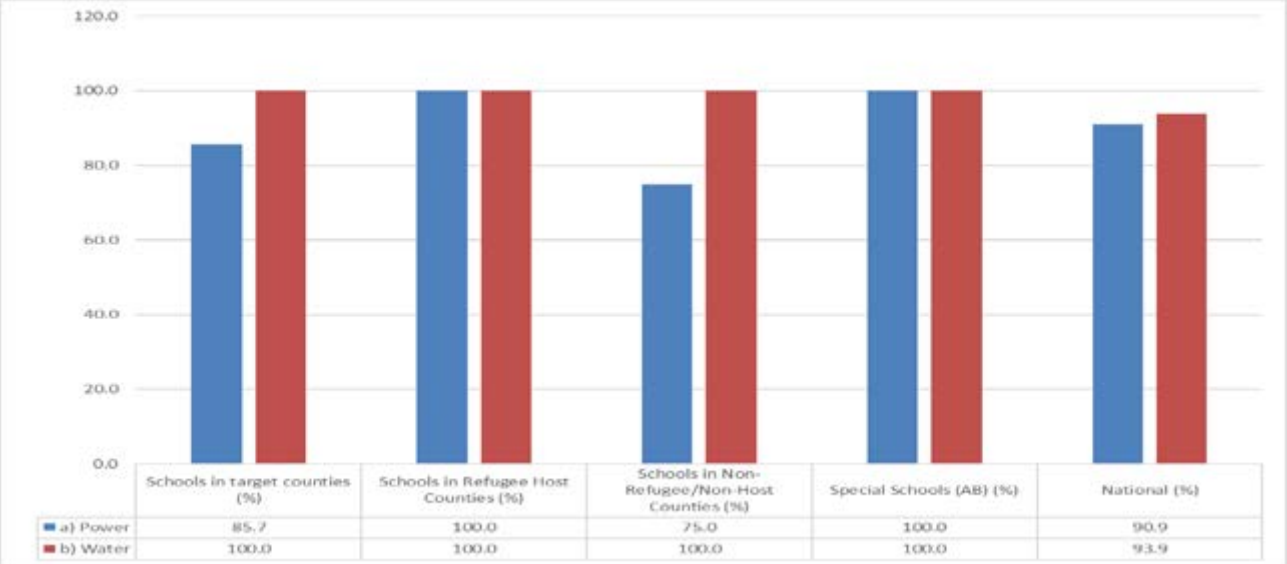
Every child deserves access to basic necessities to learn and thrive in a safe, healthy environment. Providing adequate levels of sanitation and hygiene in schools is of direct relevance to the United Nations (UN) Millennium Development Goals of achieving universal primary education, promoting gender equality and reducing child mortality. According to The Inter-Agency Network for Education in Emergencies (INEE, 2010) learning environments must include safe water, functional sanitation, school feeding programs, and recreational areas to support learner well-being and development. The study sought to establish availability and adequacy of water and power supply, sanitation facilities, school feeding, hand washing and recreation facilities in primary schools. The findings are represented in this section.

6.8.1 Availability and adequacy of Water and Power Supply

Reliable water supply is fundamental not only for hygiene and hydration of learners and school community but also for supporting various school activities. Safe, sufficient, and continuous water source for drinking, cooking, cleaning, and hygiene is essential in school. Similarly, access to consistent power supply enhances use of educational technologies and overall school operations such as lighting, learning, cooking, and operation of equipment.

The findings on availability of water and power supply in schools are presented in Figure 74.

Figure 74: *Water and Power Availability in Schools*



Source: *Kenya National Examination Council (2026)*

Nationally, as shown in Figure 74, water and power was reported by a high proportion of schools to be available at 93.9% and 90.9% respectively. Across all categories of schools, water and power availability was reported to be 100% in schools in refugee host counties, non-refugee schools in host counties and special schools and slightly lower proportion (85.7%) in schools in target counties. Nationally, 67.7% of schools reported having running water, while 83.3% of the special schools had more supply, followed by 75% of both non-refugee schools in host counties and schools in informal settlements. Availability of running water was relatively low in schools in refugee camps and schools in target counties at 50.0% and 53.2% respectively. Power shortages hinder the use of ICT tools essential for digital learning, while poor water supply disrupts hygiene and school operations which may risk widening educational inequalities and undermining the equitable delivery of CBC's digital competencies. Reliable water and electricity are crucial for enhancing healthy issues and digital literacy.

Regarding the sources of water, the study revealed that the most observed source of water nationally was piped water (25.5%) followed by borehole water and rain (22.4%) while the least observed source of water was dam and lake as reported by 4.4%, and 3.7% of schools respectively. The schools in the refugee camps had only piped water and boreholes as the source of water, and this was replicated in all other categories of schools. Rain as a source was also featured as a high source of water in the targeted schools and informal schools at 22.7% and 22.6% respectively. River was mentioned across almost all categories of schools with schools in target counties and special schools reporting 11.4% and 11.1 % respectively.

Regarding sources of power, the study established that nationally, electricity was the most available source of power as reported by 59.9% of schools while only 13.9% of schools reported availability of solar. The use of generators, biogas, wind, geothermal, hydropower and other sources of energy was very minimal nationally (below 8%). Comparison of power sources across the various school categories revealed that a good proportion (75%) of special schools (AB) were leading in the use of electricity while only 20% of schools in refugee camps reported the use of electricity. Notably, schools in refugee camps were noted to be leading in the use of solar as a source of power at 80% followed by schools in refugee host counties at 41.7%. Aside from electricity and solar, the use of all other sources of energy was very minimal across all categories of schools. Generally, the common source of power in the various categories of schools are electricity, solar and generators.

6.8.2 Sanitation facilities in schools

Sanitation facilities include all the structures constructed for the purposes of disposal of human waste and for cleanliness. Adequate and clean toilets, urinals, and waste disposal systems, including menstrual hygiene support are crucial in a school for maintaining a healthy and conducive learning environment (Safety Standards Manual for Schools in Kenya, 2008). A safe school must have sanitation facilities built up to the required standards and kept clean with high standards of hygiene. Access to adequate sanitation facilities contributes to a reduced burden of disease among children, staff and their families (WHO, 2009). This study sought to find out the availability of sanitation facilities in the various categories of schools. The data was analysed and the findings presented in Figure 75.

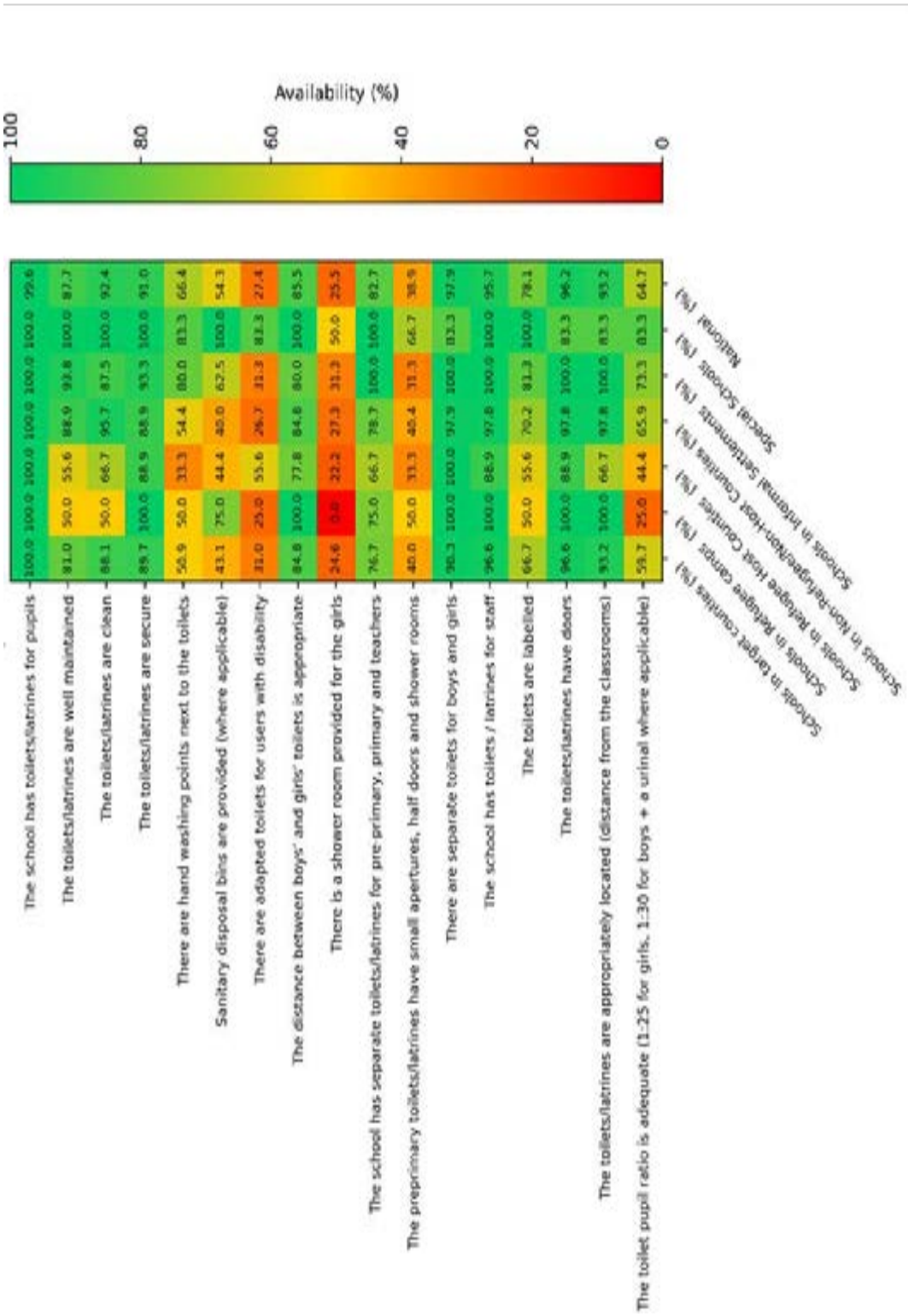


Figure 75: *Availability of Sanitation Facilities in Schools*

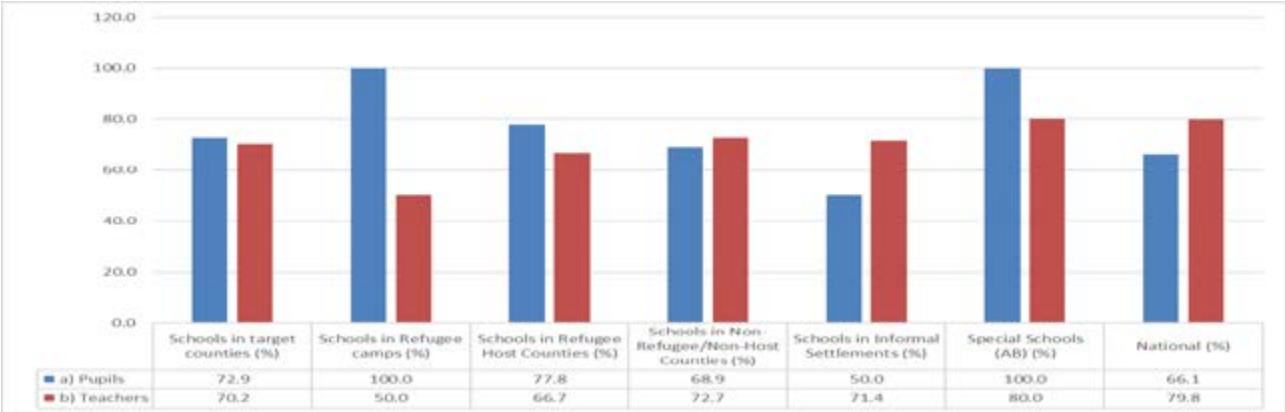
Figure 75 shows that, nationally, more than 90% of schools reported availability of clean and secure toilets/latrines for pupils, toilets/latrines for staff, separate toilets for boys and girls, toilets/latrines with doors, and toilets/latrines that are appropriately located in relation to classrooms. The study further revealed that the available boys' and girls' toilets/latrines were not only at an appropriate distance but also well maintained, as reported by 85.5% and 87.7% of schools nationally. It was also observable that schools had separate toilet facilities for pre-primary, primary, and teachers, as reported by 82.7% of schools.

However, of concern is the high proportion (72.6%) of schools reporting lack of adapted toilets for learners with disabilities, highlighting significant gaps in inclusive infrastructure. Further analysis indicates that the absence of sanitary disposal bins (45.7%) and hand washing points next to the toilets (33.6%) in many schools could pose serious health and hygiene concerns, particularly for adolescent girls and during disease outbreaks. Schools in refugee host counties and schools in informal settlements were more affected by non-availability of handwashing facilities as reported by 25% and 30% of schools respectively. This situation could be further compounded by the fact that a substantial proportion (33.6%) of schools reported that their toilet-to-pupil ratio did not meet the recommended standards (1:25 for girls, 1:30 for boys plus a urinal where applicable), implying potential overcrowding and overuse of available sanitation facilities. Of critical concern is the complete absence of girls' shower rooms in schools located within refugee camps. This gap has serious implications for menstrual hygiene management, adolescent girls' dignity, privacy, and school attendance. The lack of such facilities may heighten vulnerability, increase absenteeism, and undermine gender equity and retention efforts in already marginalized learning contexts. The Kenya School Health Policy (2018) framework guides provision of health services and promotion of healthy practices among learners and school staff. The policy emphasises the practice of washing hands to help keep learners healthy and prevent the spread of respiratory and diarrheal infections.

6.8.3 Availability of School Meals

School feeding programs play a vital role in improving learner attendance, concentration, and overall health, particularly in low-resource settings (World Food Programme, 2013).School meals aim to provide nutritious meals or snacks to support physical and cognitive development hence improving nutrition of school going children. The study aimed to assess the availability of school meal programmes for both teachers and learners, and the findings presented in Figure 76.

Figure 76: *Availability of School Meals Programme for Both Teachers and Learners.*



	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
a) Pupils	72.9	100.0	77.8	68.9	50.0	100.0	66.1
b) Teachers	70.2	50.0	66.7	72.7	71.4	80.0	79.8

Figure 76 shows that, nationally, 79.8% of schools had a school meals programme for teachers while 66.1% of schools had school meals for pupils. All schools in refugee camps and special schools indicated that they had meals programmes for their pupils while only 50% of schools in informal settlements indicated having meals programmes. Regarding teachers, there was a higher proportion of schools in special schools, schools in non-refugee host counties and schools in informal settlements that indicated that they had school meals programmes for teachers at 80%, 72.7% and 71.4%. Of concern is the schools in informal settlements that indicated having school meals programmes for learners at only 50%. Lack or inadequate school meal infrastructure and facilities, such as storage facilities, kitchens and energy-saving methods, dining spaces, and water supply, impede the implementation of school meal programs, which in turn affects learners' concentration, attendance, and overall well-being, ultimately hindering the achievement of learning outcomes in Grade 3 (Kamau et al., 2024).

The study further sought to establish the meals provided to learners at school. The study established that nationally, lunch was the most common meal provided in schools, with 63.9% of schools offering it. A similar trend is reflected across all school categories, with special schools, schools in refugee host counties and schools in refugee camps reporting offering lunch at 100%, 77.8%, 71.4% respectively. Worth noting is that all (100%) of Special schools reported availability of breakfast, Lunch and supper. SDG goal 4 intends to ensure inclusive and equitable quality education and promote life-long learning opportunities for all. The target is that by 2030, all children should have an opportunity to receive a safe, healthy, nutritious meal in schools. Of concern is the proportion of schools in informal settlement reporting not having breakfast and super their learners. Low proportions (53.9%) of schools in the informal settlement compared to other categories of schools

The study further sought to establish the modalities employed by schools in the provision of meals. It was established that the most common modality used by schools in the provision of meals was centralized school meals as indicated by 82.8% of schools. The highest proportion of schools adapting this modality included schools in refugee camps, schools in target counties and schools in refugee host counties at 100%, 90.9% and 90.2% respectively. Other modalities included packing meals from homes which was reported to be used by schools in informal settlements and schools in non-refugee host counties at 50% and 26.3% respectively. Kamau, Wanjohi, and Raburu (2024) pointed out that establishing clear modalities for the provision of school meals in primary schools is crucial for ensuring consistency, efficiency, and sustainability in feeding programmes. They further noted that a centralized meal provision ensures standardized nutrition, reduces procurement costs through bulk purchasing, and streamlines distribution, benefiting food-insecure regions.

On sustainability of food provision in schools. 40.1% of learners' reported that food consumed at school is sourced from their homes, while 36.2% indicated that their meals were sourced from their school. More than a half of learners in special schools and schools in refugee camps reported that the food they eat while at school was sourced at school at 76.9% and 57.9% respectively. Food obtained from a centralised source ensures standardised quality, nutrition and hygiene/safety. According to the findings of this study, there is evidence of diverse sources of meals for learners while in school, a situation likely to impact on food quality and nutritional value occasioned by handling and storage.

CHAPTER SEVEN 7

SCHOOL MANAGEMENT

7.1 Introduction

This chapter discusses the findings on the characteristics of the headteacher, school management, teacher management and learner management.

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SCHOOL MANAGEMENT

7.1 Introduction

This chapter discusses the findings on the characteristics of the headteacher, school management, teacher management and learner management.

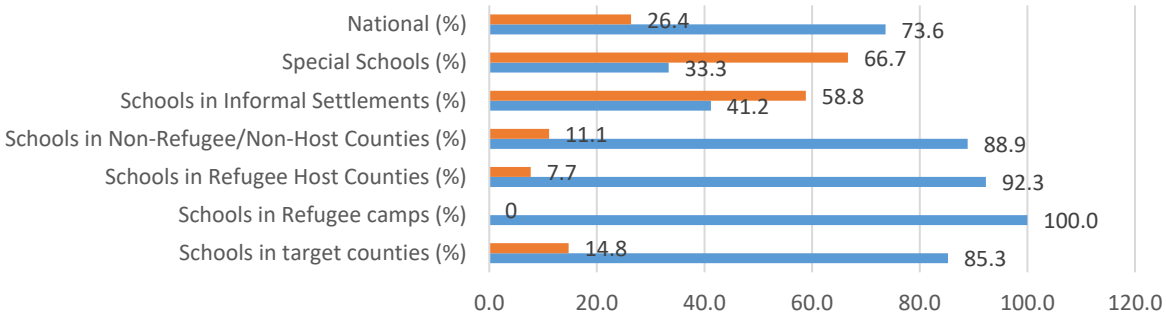
7.2 Headteacher Characteristics

In this sub section, the characteristics of the headteachers are presented in terms of gender, age, academic qualifications, professional qualifications, length of service as headteacher, management courses and training attended, as well as the usefulness of the training received by the headteacher.

7.2.1 Gender of Headteachers

An analysis of the gender distribution of headteachers in primary schools was critical in checking compliance with the Constitution of Kenya (2010). The findings are presented in Figure 77.

Figure 77: *Gender of Headteachers*



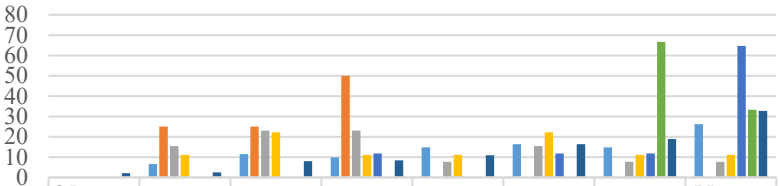
	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (%)	National (%)
Female	14.8	0	7.7	11.1	58.8	66.7	26.4
Male	85.3	100.0	92.3	88.9	41.2	33.3	73.6

The findings in Figure 77 reveal a gender disparity in assignment of leadership roles where there were more male than female headteachers as reported nationally at 73.6% and in all schools in refugee camps, 92.0% of schools in refugee host counties, 88.9% of non-refugee schools in host counties and 85.3% of schools in target counties. Only schools in informal settlements and special schools reported to have more female headteachers than their male counterparts at 58.5% and 66.7% respectively. This is a contravention of the Constitution of Kenya (2010) requirement of having a two-thirds of either gender elected or appointed to leadership positions.

7.2.2 Age of Headteachers

In this study, age was hypothesized to influence the management practices of headteachers. The findings on the age of the headteachers are presented in Figure 78.

Figure 40: *Age of Headteachers*



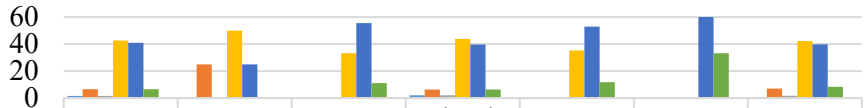
	25 years and below	26- 30 years	31- 35 years	36- 40 years	41-45 years	46-50 years	51- 54 years	55 years and above
Schools in target counties (%)	0	6.6	11.5	9.8	14.8	16.4	14.8	26.2
Schools in Refugee camps (%)	0	25.0	25.0	50.0	0	0	0	0
Schools in Refugee Host Counties (%)	0	15.4	23.1	23.1	7.7	15.4	7.7	7.7
Schools in Non-Refugee/Non-Host Counties (%)	0	11.1	22.2	11.1	11.1	22.2	11.1	11.1
Schools in Informal Settlements (%)	0	0	0	11.8	0	11.8	11.8	64.7
Special Schools (%)	0	0	0	0	0	0	66.7	33.3
National (%)	2.1	2.5	8.0	8.4	10.9	16.4	18.9	32.8

Figure 78 shows that, nationally, the majority of the headteachers were above 40 years of age. Notably, all special schools (AB) and 76.5% of schools in informal settlements have the highest proportions of headteachers aged above 51 years, pointing to the need for strategic succession management. Of concern, also, are the significant proportions of schools in target counties (6.6%), schools in refugee host counties (15.4%), non-refugee schools in host counties (11.1%) and national schools (4.6%) reporting to have headteachers aged below 30 years. This could imply inadequate leadership and pedagogical experience, thus need for targeted capacity-building programmes.

7.2.3 Academic Qualifications

Headteacher's academic qualifications have a bearing on school administration and management, as well as instructional supervision. This study, therefore, sought to determine the academic qualifications of primary school headteachers. Figure 79 summarizes the findings.

Figure 41: *Academic Qualifications of Headteachers*



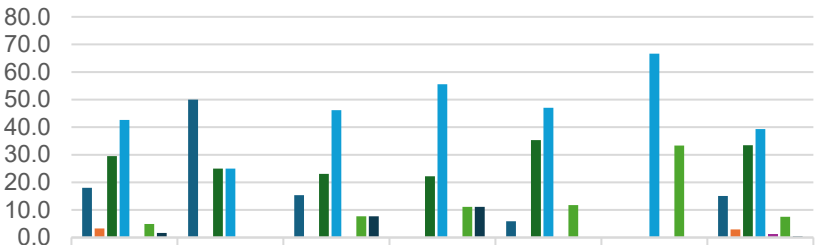
	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee /Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
KAPE/CPE/KCPE or equiv.	1.6	0.0	0.0	2.1	0.0	0.0	0.4
KCE/KCSE or its equivalent	6.6	25.0	0.0	6.3	0.0	0.0	7.1
KACE or its equivalent	1.6	0.0	0.0	2.1	0.0	0.0	1.7
Diploma	42.6	50.0	33.3	43.8	35.3	0.0	42.3
Degree	41.0	25.0	55.6	39.6	52.9	66.7	39.8
Masters	6.6	0.0	11.1	6.3	11.8	33.3	8.4
PhD	0.0	0.0	0.0	0.0	0.0	0.0	0.4

It is observable from Figure 79 that, nationally, the majority of the headteachers (90.9%) had their academic qualifications above a diploma, hence met one of the minimum requirements to head a primary school. This is also replicated in all non-refugee schools in host counties, schools in informal counties and special schools (AB). However, some schools in target counties, refugee camps and refugee host counties had headteachers with basic education only, a fact that is likely to compromise the effectiveness of school management and curriculum implementation as asserted by Salwa et al. (2019).

7.2.4 Professional Qualifications

The study sought to establish the professional qualifications of headteachers. The findings are presented in Figure 80.

Figure 80: *Professional Qualifications of Headteachers*



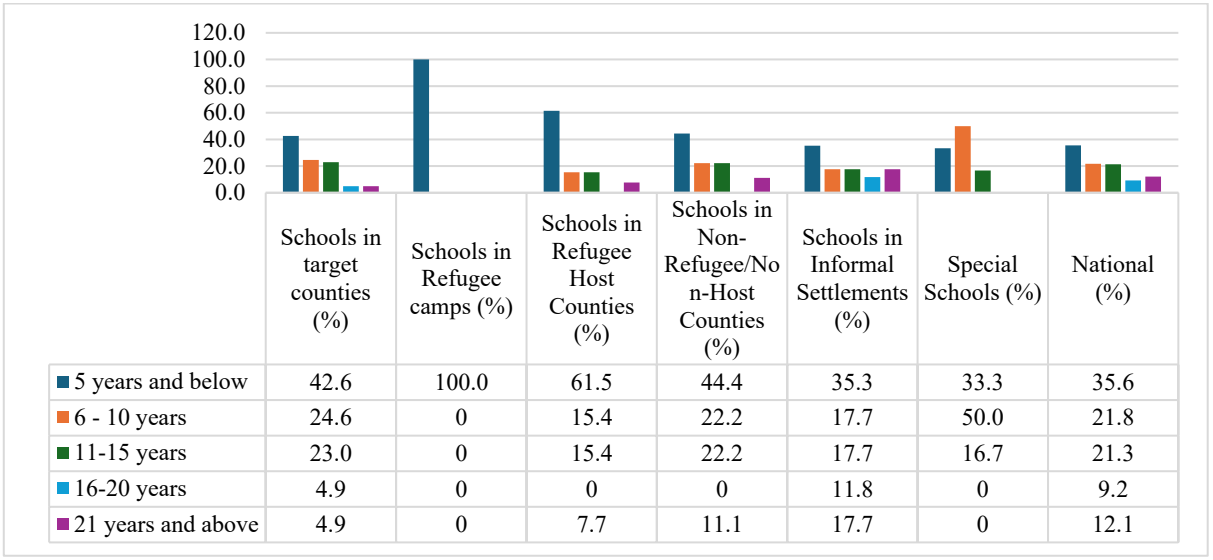
	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/ Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (%)	National (%)
P1	18.0	50.0	15.4	0	5.9	0	15.1
S1	3.3	0	0	0	0	0	2.9
Diploma in Education	29.5	25.0	23.1	22.2	35.3	0	33.5
Bachelor of Education	42.6	25.0	46.2	55.6	47.1	66.7	39.3
Post-Graduate Diploma in Education	0	0	0	0	0	0	1.3
M. Ed	4.9	0	7.7	11.1	11.8	33.3	7.5
Not trained as a teacher	1.6	0	7.7	11.1	0	0	0.4

Figure 80 shows that, nationally, majority of the headteachers had the requisite professional qualification of Diploma in Education (33.5%) and Bachelor of Education (39.3%) to head a primary school. This is also evidenced in special schools (AB) and schools in informal settlements. Of concern, however, are the significant proportions of headteachers in schools in target counties (1.6%), refugee host counties (7.7%) and non-refugee host counties (11.1%) reporting that they were not trained as teachers; a pointer, to deficiency in managerial and pedagogical supervision skills.

7.2.5 Length of Serving as Headteacher

This study sought to determine the leadership experience of the headteachers. The findings are summarized in Figure 81.

Figure 42: *Length of Serving as a Headteacher*



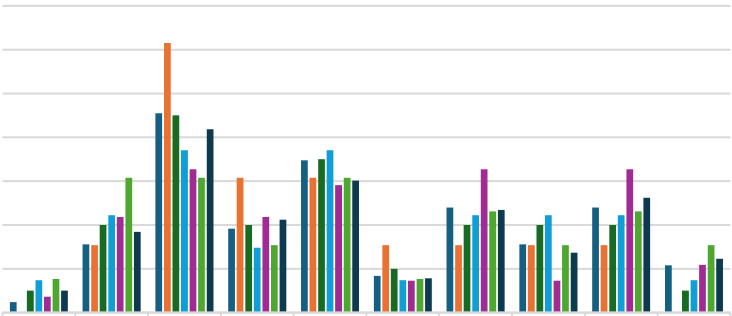
	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (%)	National (%)
5 years and below	42.6	100.0	61.5	44.4	35.3	33.3	35.6
6 - 10 years	24.6	0	15.4	22.2	17.7	50.0	21.8
11-15 years	23.0	0	15.4	22.2	17.7	16.7	21.3
16-20 years	4.9	0	0	0	11.8	0	9.2
21 years and above	4.9	0	7.7	11.1	17.7	0	12.1

Figure 81 shows that close to two thirds (64.4%) of the headteachers, nationally, had worked in their positions for more than five years, with 12.1% having more than 20 years of experience in school leadership. Most headteachers, therefore, are likely to effectively manage their schools owing to the accumulated wealth of experience as supported by the findings of Piper, Zuilkowski and Mugenda (2018). Nevertheless, more than one third of headteachers across all categories of schools reported having less than five years' experience as headteachers, indicating a need for tailored capacity building on leadership and managerial competency.

7.2.6 Management Courses and Training Attended

The study sought to establish whether headteachers had undertaken courses in management either before or after being appointed. The findings are presented in Figure 82.

Figure 43: *Management Courses and Trainings Attended by Headteachers*



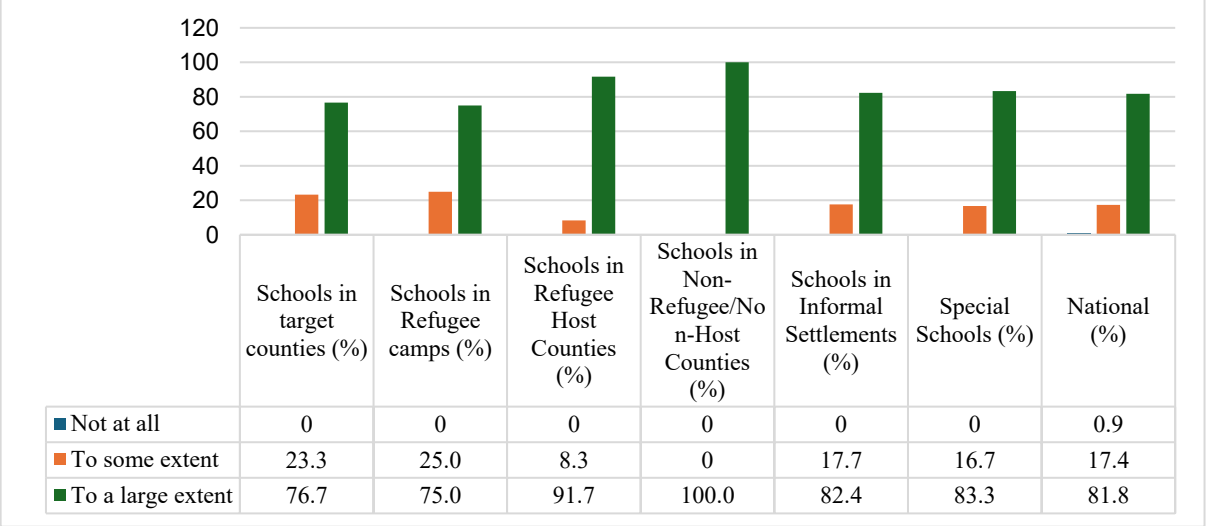
	Senior Management course	Information Communication and Technology (ICT)	Education Management course	Institutional leadership course	Guidance & Counseling	Education for Sustainable Development course	Teacher Professional Development (TPD)	Public procurement & management-course	Financial management course	Performance management course
Schools in target counties (%)	1.2	7.8	22.8	9.6	17.4	4.2	12.0	7.8	12.0	5.4
Schools in Refugee camps (%)	0	7.7	30.8	15.4	15.4	7.7	7.7	7.7	7.7	0
Schools in Refugee Host Counties (%)	2.5	10.0	22.5	10.0	17.5	5.0	10.0	10.0	10.0	2.5
Schools in Non-Refugee/Non-Host Counties (%)	3.7	11.1	18.5	7.4	18.5	3.7	11.1	11.1	11.1	3.7
Schools in Informal Settlements (%)	1.8	10.9	16.4	10.9	14.6	3.6	16.4	3.6	16.4	5.5
Special Schools (%)	3.9	15.4	15.4	7.7	15.4	3.9	11.5	7.7	11.5	7.7
National (%)	2.5	9.2	20.9	10.6	15.1	3.9	11.7	6.8	13.1	6.1

The findings in Figure 82 show that nationally, a significant number of headteachers had undertaken courses in Education Management (20.9%), Guidance and Counseling (15.1%), Financial Management (13.1%), Teacher Professional Development (TPD) (11.7%) and Institutional Leadership (10.6%). Few of them attended courses in Senior Management (2.5%), Education for Sustainable Development (3.9%), Performance Management (6.1%), Public Procurement (6.8%) and Management and Information and communication Technology (ICT) (9.2%). It is commendable that most headteachers had been exposed to an array of management courses across the various school categories.

7.2.7 Usefulness of Training Received

The headteachers were also asked to indicate the usefulness of the courses they had undertaken. The findings are presented in Figure 83.

Figure 83: *Usefulness of Training Received*



	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (%)	National (%)
Not at all	0	0	0	0	0	0	0.9
To some extent	23.3	25.0	8.3	0	17.7	16.7	17.4
To a large extent	76.7	75.0	91.7	100.0	82.4	83.3	81.8

The findings in Figure 83 show that the training received by the headteachers was useful as evidenced by 81.8% of headteachers nationally and all headteachers in non-refugee schools in host counties who reported that the training was useful 'to a large extent'. The finding echoes the assertion by Kuranchie (2015) on the usefulness of in-service training in enhancing effective delivery service.

7.3 School Management

This subsection discusses findings on the following aspects of school management: availability of records in schools; Boards of Management (BOM) and Parents Association (PA); availability of School Strategic Plan and School Improvement Plan (SIP); legal and policy documents available in schools; school-level policies in schools; performance contracts; and risk factors found in the schools. The subsection also discusses adherence to minimum standards on school safety, availability and adequacy of water and power, handwashing provisions, sickroom/sanitarium as well as kitchen. Other aspects covered include guidelines on ICT integration, utilization of ICT in school management and learner participation in co-curricular activities.

7.3.1 Availability of Records in Schools

Headteachers were required to indicate the records available in their schools. The findings are summarized in Table 49.

Table 49: *Availability of Records in Schools*

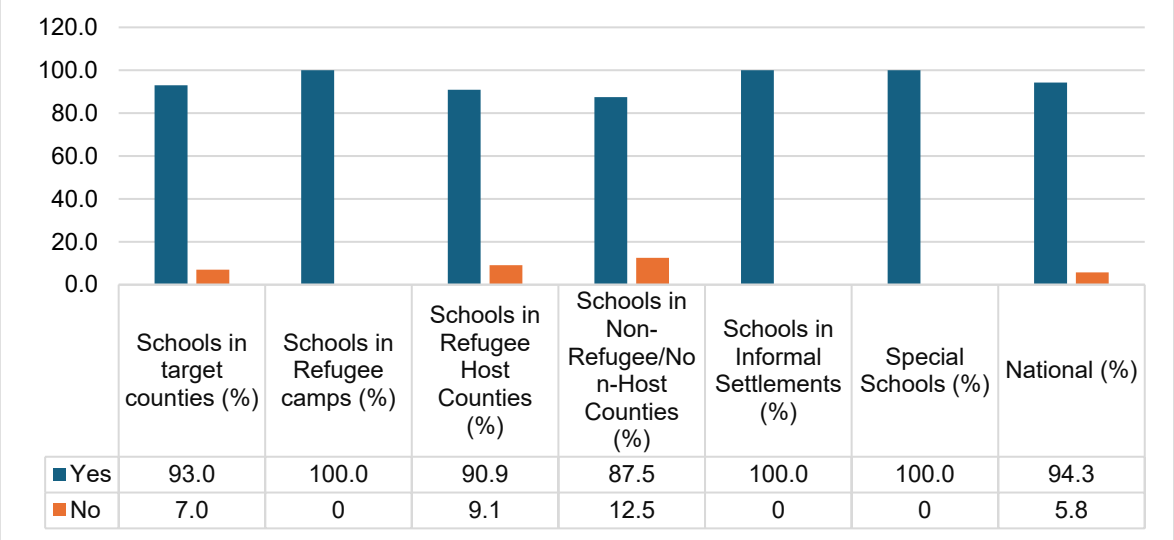
Options	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Vision	95.2	100.0	93.3	90.0	93.3	100.0	95.3
Mission	93.6	100.0	93.3	90.0	93.8	100.0	94.9
Motto	98.4	100.0	100.0	100.0	93.8	100.0	97.5
School funds (public schools)	77.2	20.0	60.0	80.0	81.3	83.3	75.7
Report on attainment of learning outcomes	93.4	80.0	80.0	80.0	93.8	100.0	95.3
Subject panel programmes	85.3	100.0	86.7	80.0	87.5	80.0	87.2
Teachers responsibility list	93.6	100.0	93.3	90.0	93.8	100.0	94.9
Duty rosta	100.0	100.0	100.0	100.0	93.8	100.0	98.3
Registration certificate	95.2	100.0	93.3	90.0	93.8	100.0	94.4
Learners leadership list	87.1	100.0	80.0	70.0	87.5	100.0	86.0
Non-teaching staff list	88.7	100.0	93.3	90.0	81.3	100.0	83.5
School rules	90.2	100.0	86.7	80.0	93.8	100.0	88.8
BOM / PA list (public schools)	86.2	100.0	93.3	90.0	93.8	100.0	85.1
Suggestion box	48.3	60.0	60.0	60.0	68.8	66.7	47.2
Classroom and dormitory registers	81.7	80.0	80.0	80.0	87.5	100.0	82.5
Evidence of mitigation on identified absenteeism cases	66.7	80.0	73.3	70.0	81.3	83.3	68.1
Records on orphans and vulnerable children	55.7	100.0	66.7	50.0	81.3	100.0	58.7

It is notable from Table 49 that the schools kept records, with the most available records in schools being school vision, mission and motto; duty rota; teachers' responsibility list and school rules while the least available records included evidence of mitigation on identified absenteeism cases, suggestion box and records on orphans and vulnerable children. The apparent lack of some critical records is likely to negatively impact on school management as observed by Chidinma et al. (2024) and Ateghe et al. (2023).

7.3.2 Functional Board of Management

Availability of functional BOMs has a bearing on school management practices and performance as noted by Muroko et al. (2022). The study sought to determine if schools had functional BoMs. The findings are presented in Figure 84.

Figure 84: *Availability of Functional BoMs*



	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (%)	National (%)
Yes	93.0	100.0	90.9	87.5	100.0	100.0	94.3
No	7.0	0	9.1	12.5	0	0	5.8

The findings in Figure 84 show that most (94.3%) of the schools had functional BoMs. However, of concern is the significant proportion of schools in target counties (7.0%), in refugee host counties (9.1%) and in non-refugee host counties (12.5%) reporting that they did not have functional BoMs. Lack of functional BOMs may negatively affect school operations, student performance, and resource management. This points to a need for the Kenya Education Management Institute (KEMI) to conduct capacity-building workshops for BOMs on their roles, while the Ministry of Education to regularly audit BOM functionality and dissolve non-functional BOMs.

7.3.3 Contribution of Boards of Management to Managing Schools

It was considered necessary to find out if the BoM contributed in any way to the management of schools. The findings from the headteachers are presented in Table 50.

Table 50: *Contribution of Boards of Management to Managing Schools*

	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Agree	79.3	100.0	80.0	71.4	87.5	100.0	85.4
Disagree	20.8	0.0	20.0	28.6	12.5	0.0	14.6

From Table 50, it is observable that headteachers nationally and across all school categories agreed that BoM contributed to the management of their schools. This finding is consistent with Okoth and Mari (2017), whose study on Board of Management initiatives in Kajiado secondary schools demonstrated that BOMs contribute to quality education through resource mobilization and the financing of teacher professional development.

7.3.4 Availability of School Strategic Plan

The availability of school strategic plans (SSPs) was a variable of interest to this study. The findings are summarized in Table 51.

Table 51: *Availability of School Strategic Plan*

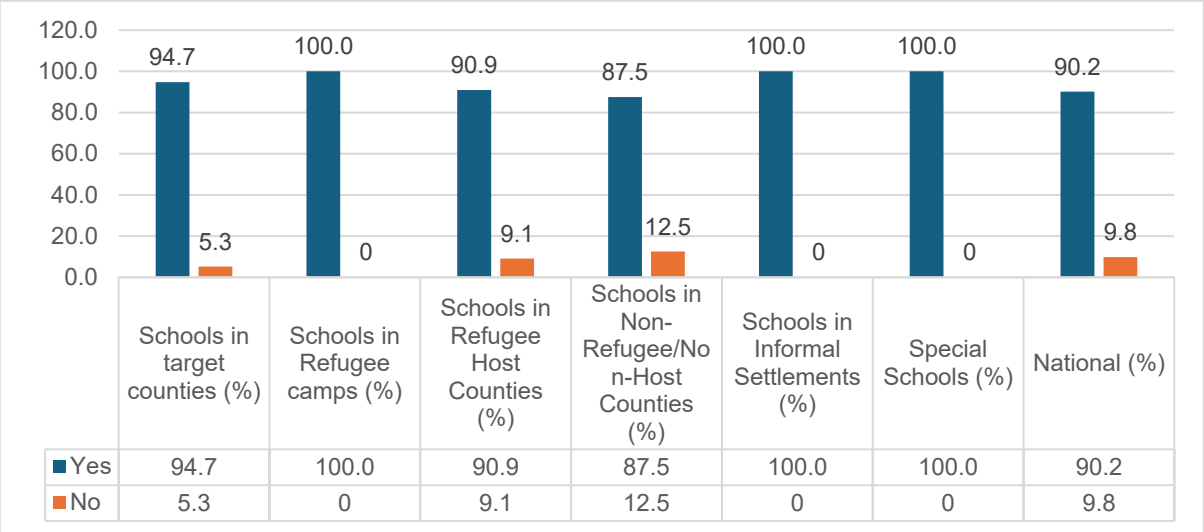
	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Yes	92.9	66.7	81.8	87.5	93.8	100.0	91.4
No	7.1	33.3	18.2	12.5	6.3	0.0	8.6

The findings in Table 51 show that more than two thirds of the schools had SSPs, a practice that is likely to positively influence academic performance as observed by Chimuka (2016). Worth noting is the 33.3%,18.2%, 12.5% of the headteachers of schools in refugee camps, refugee host counties and non-refugee host counties who indicated their schools did not have current SSPs. This is likely to have a negative impact on the overall management of schools and learner performance. The study further established that SSPs were beneficial to the schools, to a large extent, as reported by most of the headteachers, nationally and across all categories of schools.

7.3.5 Availability of School Improvement Plan

The study sought to establish if the schools had School Improvement Plans (SIPs). The findings are presented in Figure 85.

Figure 85: *Availability of School Improvement Plan*



It is notable from Figure 85 that nearly all schools had SIP. Of concern, however, are the sizable proportions of headteachers nationally (9.8%), non-refugee schools in host counties (12.5%) and refugee host counties (9.1%) reporting not to have SIPs, against the requirement of National Quality Assurance Standards Framework, NEQASF (2019). This is likely to impede prioritization of school activities and resource allocation.

7.3.6 Priority Areas Targeted by SIP

The headteachers further indicated the priority areas targeted by the SIPs and the findings are displayed in Table 52.

Table 52: *Priority Areas Targeted by SIP*

	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Supporting teachers and effective teaching	13.9	18.8	13.4	11.8	13.3	13.3	14.5
Enhancing learning outcomes in foundational numeracy and literacy.	12.5	12.5	11.9	11.8	11.5	10.0	12.4

	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Improving school environment.	13.9	18.8	14.9	13.7	13.3	13.3	14.0
Improving Water Sanitation and Health (WASH)	13.1	12.5	13.4	13.7	13.3	16.7	12.4
Tracking learner attendance	11.1	12.5	11.9	11.8	10.6	10.0	10.8
Monitoring learner progress	11.4	6.3	10.5	11.8	12.4	13.3	12.6
Improving management and accountability in schools	12.8	12.5	11.9	11.8	14.2	13.3	12.7
Participating in TPAD and in SBTS	11.1	6.3	11.9	13.7	11.5	10.0	10.7

As shown in Table 52, all the schools had identified areas for SIP interventions with varied degrees of priority, covering both instructional and operational concerns. These areas ranged from supporting teachers and effective teaching to enhancing foundational numeracy and literacy, improving school environment, improving Water Sanitation and Health (WASH), and strengthening management and accountability in schools. Notably, very few schools prioritized tracking learner attendance, monitoring learner progress and participating in TPAD and in SBTS in their SIPs. This may deny teachers critical data for assisting learners to succeed academically and socially.

7.3.7 Legal and Policy Documents Available in Schools

The study sought to establish availability of specified legal and policy documents in the schools. The findings are provided in Table 53 and 54.

Table 53: *Legal Documents Available in Schools*

	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Children's act (2001)	92.2	66.7	66.7	66.7	100.0	100.0	92.3
Public Health Act, 2012	71.7	50.0	66.7	71.4	91.7	100.0	71.6
Constitution of Kenya (2010)	84.6	33.3	70.0	85.7	93.3	100.0	88.5
Basic Education Act (2013)	90.7	66.7	80.0	85.7	100.0	100.0	93.5
Disposal of Resources Act (2015)	77.8	66.7	55.6	50.0	71.4	83.3	70.4
Public Procurement and asset disposal Act, (2015)	83.3	66.7	66.7	66.7	92.9	100.0	84.0
Persons with Disabilities Act (2003)	50.0	0.0	50.0	66.7	72.7	100.0	54.2
KNEC Act (2012)	77.1	0.0	62.5	83.3	92.9	83.3	82.1
TSC Act (2012)	90.6	33.3	72.7	87.5	93.3	100.0	92.9
TSC Code of Regulations	90.9	33.3	72.7	87.5	100.0	100.0	95.4

It is observable from Table 53 that most available legal documents in schools were Children's Act (2001); Public Health Act (2012); the Constitution of Kenya (2010); Basic Education Act (2013); Public Procurement and Asset Disposal Act (2015); Persons with Disabilities Act (2003); KNEC Act (2012); TSC Act (2012) and TSC Code of Regulations. However, there are still portions of schools without the listed legal documents, which may be a pointer to lack of awareness or enforcement by the relevant ministries and the TSC.

Table 54: *Policy Documents Available in Schools*

	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Safety Standard manual for Schools in Kenya (2008)	71.4	66.7	50.0	42.9	92.3	100.0	75.5
Education Sector Policy on HIV and AIDS, 2013	47.6	0.0	33.3	42.9	83.3	83.3	58.6
Education and Training Sector Gender Policy, 2015	37.2	50.0	33.3	28.6	75.0	100.0	47.3
Sector policy on learners and trainees with disabilities (2018)	30.2	0.0	22.2	28.6	50.0	50.0	34.6
Child friendly schools guidelines, (2006)	75.0	66.7	70.0	71.4	92.3	83.3	76.6
Kenya school health policy (2018)	42.2	50.0	50.0	50.0	81.8	60.0	51.2
National curriculum policy (2018)	63.0	50.0	44.4	42.9	81.8	75.0	64.6
Education sector disaster management policy (2017)	45.5	0.0	33.3	42.9	81.8	75.0	55.4
Kenya School Health Policy, 2018	41.3	50.0	55.6	57.1	75.0	25.0	48.5
National Pre-Primary Policy, 2018	40.0	0.0	22.2	28.6	45.5	75.0	42.4
National Information and Communication Technology (ICT) Strategy for Education and Training, (2006)	41.9	0.0	33.3	42.9	63.6	100.0	42.7

The findings in Table 54 show that most of the schools did not have the listed policy documents, yet these are critical for reference in managing schools. It is only in special schools (AB) that all headteachers indicated that they had the Safety Standard Manual for Schools in Kenya (2008), the Education and Training Sector Gender Policy (2015) and the National Information and Communication Technology (ICT) Strategy for Education and Training, (2006). This points to the need to enhance headteacher awareness on the existing policy documents for effective implementation of their provisions in schools.

7.3.8 School-level Policies in Schools

The study sought to establish the availability of school level policies in the schools. The findings are presented in Table 55.

Table 55: *Available School Level Policies*

	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Language policy	16.1	12.5	13.6	14.0	13.5	12.1	15.6
School feeding policy	10.5	18.8	15.2	14.0	10.4	15.2	9.8
Lesson recovery policy	14.9	12.5	15.2	16.0	13.5	12.1	14.4
Assessment policy	14.6	12.5	13.6	14.0	13.5	12.1	13.8
School policy on discipline	14.6	12.5	13.6	14.0	13.5	12.1	14.3
School council	11.2	12.5	12.1	12.0	13.5	12.1	11.6
Academic open days policy	7.1	0.0	6.1	8.0	10.4	9.1	8.5
Child protection policy	11.2	18.8	10.6	8.0	11.5	15.2	12.1

Table 55 shows that all school categories had policies in all the listed areas except refugee camp-based schools which did not have a policy on academic open days. Notably, language policy was cited as the most available one nationally (15.6%), in schools in target counties (16.1%), and in schools in informal settlements (13.5%).

7.3.9 Signing of Performance Contracts

Headteachers were asked to indicate whether staff in their schools signed performance contracts. The findings are presented in Table 56.

Table 56: *Signing of Performance Contracts*

	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Yes	68.4	66.7	72.7	75.0	57.1	33.3	69.9
No	31.6	33.3	27.3	25.0	42.9	66.7	30.1

As shown in Table 56, the majority of headteachers indicated that teachers in their schools sign performance contracts, with special schools (AB) recording the lowest proportion at 33.3%. This finding raises a concern, as TSC guidelines require only heads of institutions to sign performance contracts, while teachers are appraised through the Teacher Performance Appraisal and Development (TPAD) tool. Nevertheless, Wekoye (2023) found a significant and positive relationship between performance contracts and school systems improvement in primary schools. The proportion (66.7%) of headteachers of schools in refugee camps reporting that they

sign performance contracts, yet they are not TSC employees, suggests a good practice by their employers.

7.3.10 Risk Factors found in Schools

The study sought to identify risk factors found in schools. The findings are presented in Table 57.

Table 57: *Risk Factors found in Schools*

	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in non-refugee/ Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Open pits/manholes	1.7	20.0	0.0	0.0	12.5	0.0	3.1
Open sewer/ drainage	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Use of barbed wire to secure living areas	23.3	40.0	0.0	26.7	6.3	0.0	17.5
Tethering pegs in the playgrounds	5.0	0.0	0.0	6.7	12.5	0.0	3.1
Unsecured construction sites	1.7	0.0	10.0	0.0	0.0	0.0	3.1
Asbestos material	1.7	0.0	0.0	2.2	0.0	0.0	1.8
Slippery surfaces	1.7	0.0	0.0	2.2	18.8	16.7	5.3
Abandoned/exposed electrical wires	1.7	0.0	0.0	2.2	0.0	0.0	0.9
Abandoned pit latrines / filled pit latrines/blocked toilets	5.0	20.0	0.0	4.4	6.3	0.0	3.1
Unfenced swimming pools (where applicable)	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Exposed stones	13.3	0.0	20.0	13.3	6.3	16.7	15.4
Unleveled grounds	30.0	0.0	60.0	26.7	12.5	33.3	27.2
Broken glass/bottles	1.7	0.0	0.0	2.2	6.3	0.0	2.2
Long grass	13.3	20.0	10.0	13.3	18.8	33.3	16.7

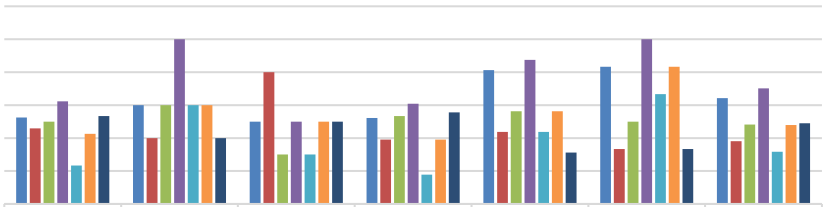
Findings in Table 57 indicate that schools had the presence of various risk factors within the school environments. For instance, nationally, unleveled grounds (27.2%) and barbed wire (17.5%) are the most common risks, but the national averages often mask the severity of hazards found in specific marginalized settings. Schools in refugee camps had the highest concentration of open pits/manholes (20.0%) and abandoned pit latrines (20.0%), indicating critical WASH-related safety failures. Schools in refugee host counties reported the highest prevalence of structural hazards, specifically unleveled grounds (60.0%) and exposed stones (20.0%), suggesting poor site preparation and maintenance. Schools in informal settlements face distinct risks related to poor sanitation and waste, recording the highest rates of slippery surfaces (18.8%), long grass (18.8%), and open pits/manholes (12.5%). The findings suggest that while general disrepair (unleveled grounds) is widespread, the most acute safety threats are concentrated in refugee and informal settlement contexts. To mitigate such risks, the Ministry

of Education should ensure that funds disbursed under the KPEEL program are utilized in constructing or upgrading the facilities in schools particularly those in refugee camps, refugee host counties and informal settlements.

7.3.11 Adherence to School Safety Standards

The study sought to establish adherence to safety standards in schools. The findings are presented in Figure 86.

Figure 44: *Adherence to School Safety Standards*



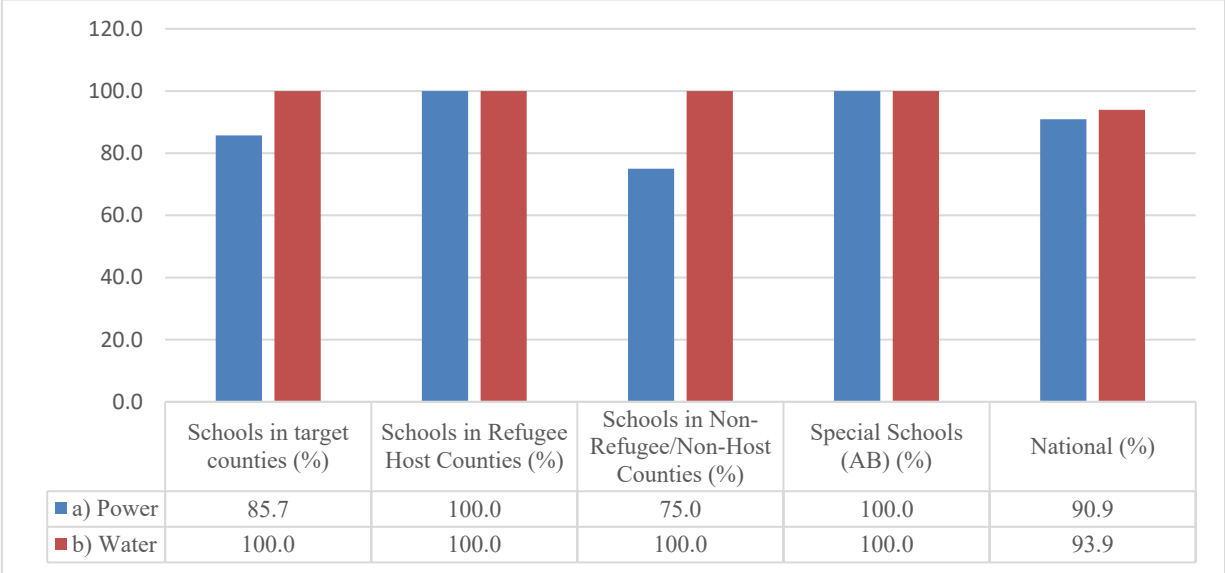
	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
a) Is the school fence secure and non-penetrable?	52.5	60.0	50.0	52.2	81.3	83.3	64.3
b) Are there foot paths running through the school?	45.9	40.0	80.0	39.1	43.8	33.3	38.1
c) Are there controls on use of foot paths by outsiders (where applicable)	50.0	60.0	30.0	53.3	56.3	50.0	48.3
d) Does the school have a well manned lockable gate?	62.3	100.0	50.0	60.9	87.5	100.0	70.2
e) Are persons who enter the school screened?	23.3	60.0	30.0	17.8	43.8	66.7	31.7
f) Are there signage in the school to guide visitors?	42.6	60.0	50.0	39.1	56.3	83.3	47.9
g) Does the school have road signage showing direction and distance?	53.3	40.0	50.0	55.6	31.3	33.3	49.0

The findings on Figure 86 show that at the national level, a well manned lockable gate is the most adhered to safety standard as observed in 70.2% of schools. This is followed by a secure and non-penetrable school fence (64.3%), road signage showing distance and direction (49.0%) and controls on use of foot paths by outsiders (48.3%). These findings indicate that having a well manned and secure gate is the leading safety standard adhered to followed by a secure and non-penetrable fence. Other safeguards such as screening of visitors, were only visible in a few schools.

7.3.12 Adherence to Standards on Availability of Water and Power

The study sought to establish the adherence to standards on availability of water and power by the schools. The findings are as presented in Figure 89.

Figure 45: *Adherence to Standards on Availability of Water and Power*



The findings in Figure 89 show that majority of schools adhere to the standards on adequacy of water. For instance, nationally, 93.9% of schools adhere to the standards on availability of water and 90.9% to the standards of availability of power. This is also observed across all selected categories of schools with all schools (100.0%) adhering to the standards of availability of water. This is an indication that nearly all schools are adhering to the standards of availability of water and power, thus ensuring conducive learning environments.

7.3.13 Adherence to Kitchen Minimum Standards

The study carried out observation to determine whether schools are adhering to kitchen minimum standards. The findings are as presented in Table 58.

Table 58: *Adherence to Kitchen Minimum Standards*

Standard/Provision	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/ Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Is ventilated (including chimney/smoke canopy) and spacious enough in line with the number of institution's enrolment	66.7	100.0	83.3	59.5	88.9	100.0	66.5

Standard/Provision	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/ Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
Is fitted with firefighting equipment and a functional first aid kit	31.9	80.0	16.7	27.8	60.0	83.3	36.6
Be fitted with cloak room and changing rooms	37.0	40.0	33.3	37.1	50.0	83.3	33.2
Be clean and well maintained	81.3	100.0	66.7	81.1	90.0	100.0	84.9
Have staff with valid medical certificates	60.4	100.0	50.0	56.8	90.0	100.0	67.9
Has adequate lighting	66.7	60.0	100.0	62.2	80.0	100.0	77.2
Has separate storage with racks for grocery and grains	50.0	60.0	66.7	45.7	80.0	66.7	55.9
Has separate storage facility for cooking equipment and utensil	53.2	80.0	66.7	47.2	90.0	83.3	59.5
Has gas cylinders housed externally where applicable	19.6	40.0	16.7	17.1	80.0	50.0	32.1
Has external dish washing area	60.9	60.0	83.3	57.1	77.8	100.0	61.5
Has outdoor rack for sun drying of utensils	66.0	60.0	83.3	63.9	44.4	83.3	58.3
Is sited away from the institution's waste dumping area/toilet	90.0	100.0	83.3	89.7	88.9	100.0	90.4
Has an appropriate designated serving area	56.5	60.0	83.3	51.4	77.8	100.0	60.3
Has adequate external hand washing points	61.7	60.0	66.7	61.1	77.8	83.3	67.9
Has outdoor shaded area for storage of firewood	59.6	80.0	66.7	55.6	88.9	83.3	62.3
Food handlers have appropriate public health medical clearance	65.2	100.0	50.0	62.9	66.7	83.3	67.2
Is sited at a reasonable distance from the tuition and dormitory blocks	72.0	80.0	83.3	69.2	77.8	83.3	77.0
Has hygienic waste handling equipment	69.4	80.0	83.3	65.8	88.9	100.0	75.1
Has a supply of clean and safe water for cooking and washing	87.8	100.0	83.3	86.8	90.0	100.0	88.4
f) Has surfaces constructed with easy to	60.4	100.0	66.7	54.1	90.0	100.0	66.2

Standard/Provision	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/ Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
clean and maintain material							
g) Has a functional and well-maintained drainage system	49.0	60.0	50.0	47.4	80.0	83.3	59.8
h) Is close to the food store	70.2	100.0	100.0	61.1	80.0	100.0	71.4
i) Has enough and appropriate utensils and a serving area	66.7	100.0	66.7	62.2	80.0	83.3	66.5

The findings in Table 58 show that, nationally, most schools ensure that the place where learners have meals is sited away from the institution's waste dumping area/toilet and there is supply of clean and safe water for cooking and washing as observed in 90.4% and 88.4% of schools. Most importantly, most schools have ensured that food handlers have appropriate public health medical clearance. Further, the findings show that, nationally, most schools have centralized school meals as observed in 82.8% of schools. This could be attributed to the implementation of the school feeding program in most schools.

7.3.14 Guidelines on ICT Integration

The study sought to determine if schools had guidelines on ICT integration. The findings are presented in Figure 90.

Figure 90: *Guidelines on ICT Integration*

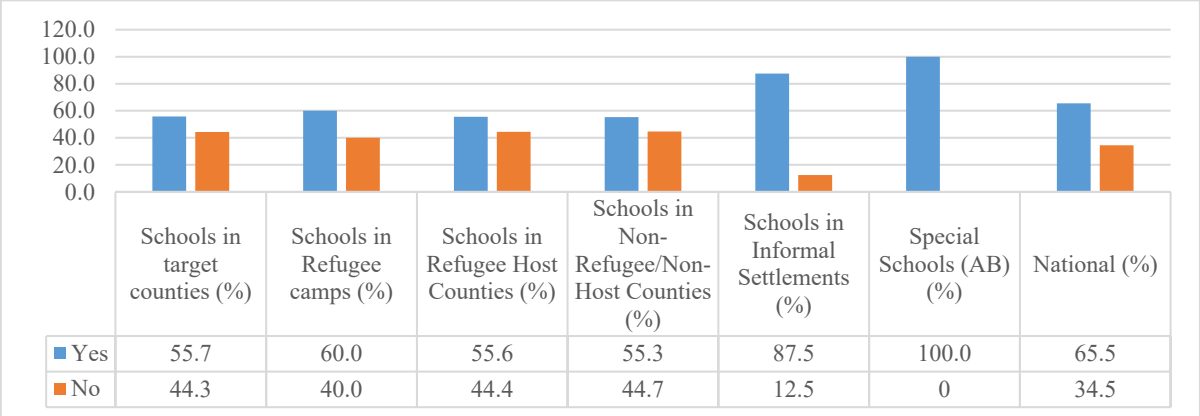


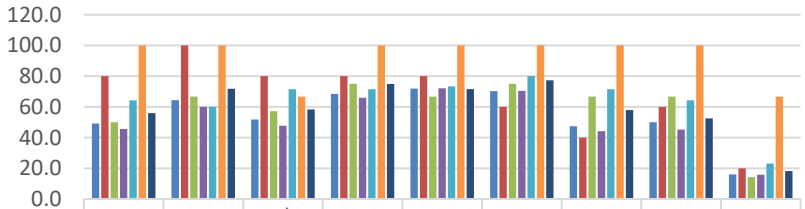
Figure 90 shows that 65.5% of schools nationally have ICT integration guidelines. This means about one in three schools still have not integrated ICT guidelines, a gap worth addressing. The

notably higher rates in special schools (100%) and schools in informal settlements (87.5%) are somewhat surprising, as these school types are often assumed to be under-resourced or less structured. Their strong compliance suggests that either targeted policy interventions have reached these schools effectively, or that these schools recognize the particular importance of structured ICT guidance given their unique learner needs and contexts. Overall, the finding points to promising progress at the national level, but the 34.5% of schools without guidelines represents a meaningful policy gap that deserves further attention.

7.3.15 Utilization of ICT in School Management

The study sought to find out how schools utilize ICT in school management. The findings are as presented in Figure 91.

Figure 91: *Utilization of ICT in school Management*



	a) School admission	b) Management of examinations and assessment	c) Human resource management (teachers, learners and support staff)	d) Staff appraisal and performance reporting	e) Teacher Professional Development	f) Communicating with stakeholders e.g., SMS	g) Financial management	h) Entertainment	i) Surveillance/ Security monitoring
Schools in target counties (%)	49.2	64.4	51.8	68.4	71.9	70.2	47.4	50.0	16.0
Schools in Refugee camps (%)	80.0	100.0	80.0	80.0	80.0	60.0	40.0	60.0	20.0
Schools in Refugee Host Counties (%)	50.0	66.7	57.1	75.0	66.7	75.0	66.7	66.7	14.3
Schools in Non-Refugee/Non-Host Counties (%)	45.7	60.0	47.7	65.9	72.1	70.5	44.2	45.2	15.8
Schools in Informal Settlements (%)	64.3	60.0	71.4	71.4	73.3	80.0	71.4	64.3	23.1
Special Schools (AB) (%)	100.0	100.0	66.7	100.0	100.0	100.0	100.0	100.0	66.7
National (%)	55.9	71.8	58.4	74.9	71.6	77.3	58.0	52.5	18.2

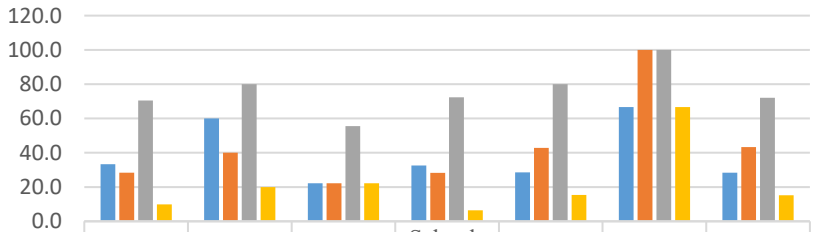
The findings in Figure 91 show that, nationally, schools use ICT in communication with stakeholders (77.3%), staff appraisal (74.9%) and management of examinations and assessment (71.8%). Utilization of ICT in special schools (AB) was evident in all the aspects of school management listed, while surveillance and/security monitoring were found to be least

incorporated in use of ICT across all the categories of schools. This was corroborated by the feedback from FGDs that pointed to the utilization of ICT by schools in some of their management practices, especially communication with stakeholders. For instance, a parent observed, "*There exist digital communication platforms like WhatsApp groups for literate parents to receive school updates.*"

7.3.16 Learner Participation in Co-curricular Activities

The study sought to establish how schools facilitate learners to participate in co-curricular activities. The findings are presented in Figure 92.

Figure 92: *Learner Participation in Co-curricular Activities*



	Schools in target counties (%)	Schools in Refugee camps (%)	Schools in Refugee Host Counties (%)	Schools in Non-Refugee/ Non-Host Counties (%)	Schools in Informal Settlements (%)	Special Schools (AB) (%)	National (%)
a) Play Station (for PP1 – PP2 learners)	33.3	60.0	22.2	32.6	28.6	66.7	28.3
b) Have appropriate fixed and movable play items	28.3	40.0	22.2	28.3	42.9	100.0	43.3
c) Playing field with adequate space (not more than 200 meters away if not within school compound)	70.5	80.0	55.6	72.3	80.0	100.0	72.0
d) Have appropriate adapted fixed and movable play items for learners with disabilities	9.8	20.0	22.2	6.4	15.4	66.7	15.2

The findings on Figure 92 show that nationally, it was reported that 72% of the schools provided a playing field with adequate space, followed by having appropriate fixed and movable play items as observed at 43.3%. The study also found that 15.2% of schools had appropriate adaptable fixed and movable play items for learners with disabilities, most of which were observed in special schools (AB). The findings are an indication that most schools have made efforts to provide a playing field for learners either within or outside the school compound. Mann et al. (2022) established that learning in natural outdoor settings increases student engagement and ownership of their learning, improves academic achievement, and development of social and collaborative skills.

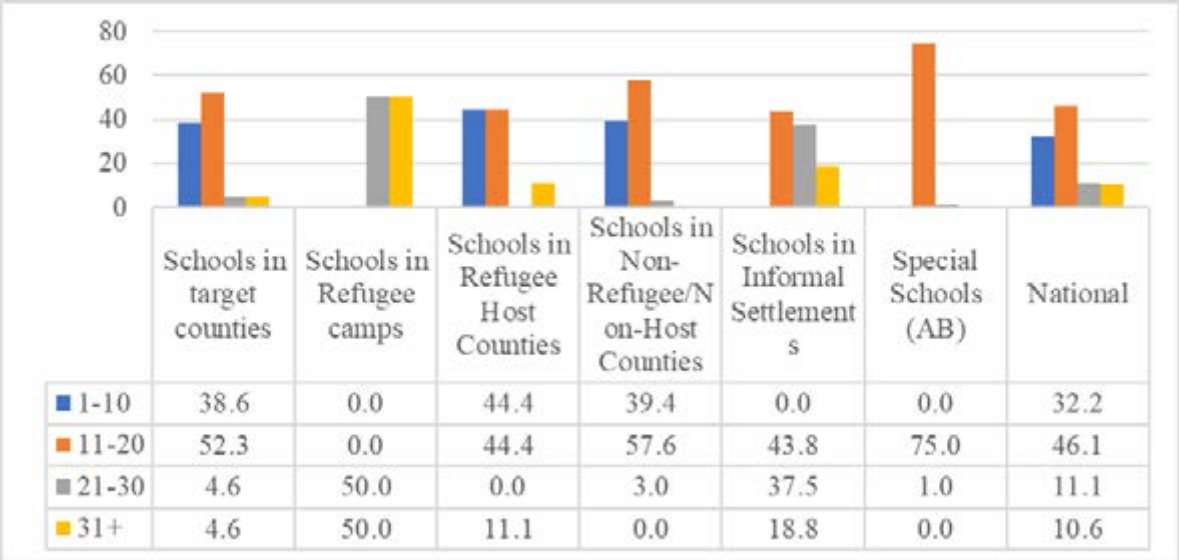
7.4 Teacher Management

School leadership and management has a bearing on teacher management and consequently on learner achievement. In this subsection, staffing issues, discipline and conduct, professional development and records, TPAD and quality monitoring by QASOs are discussed.

7.4.1 Approved Teacher Establishment and Total Number of Teachers Teaching Grade 3

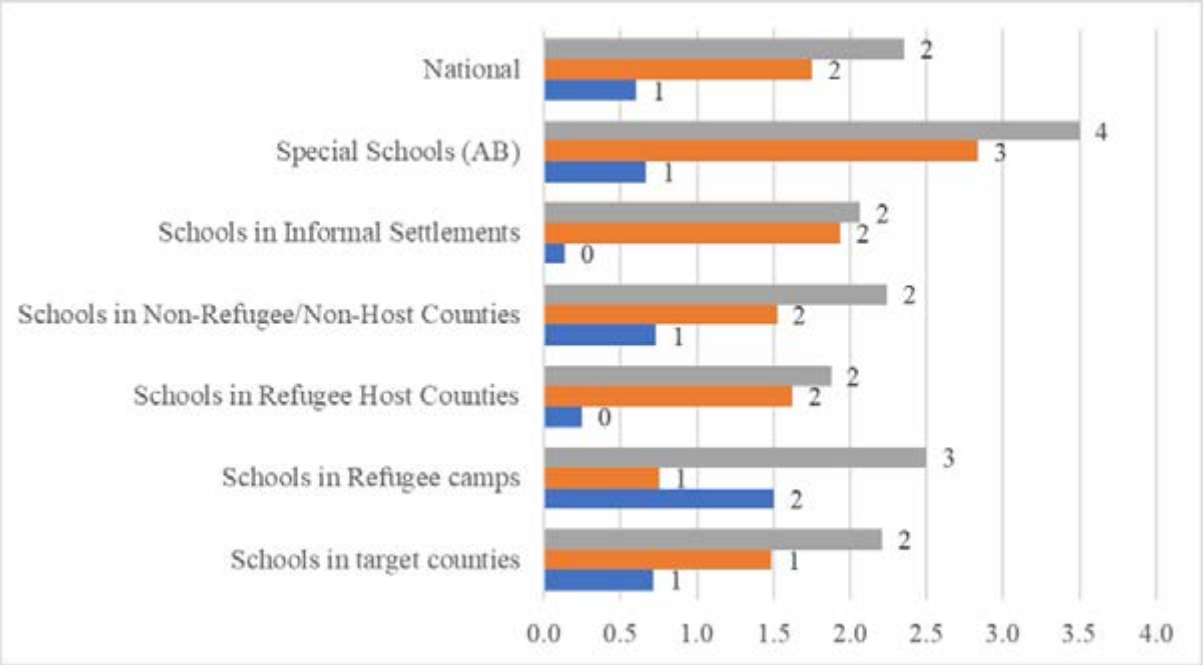
Teacher establishment was a variable of interest in this study because it has a bearing on the attainment of learning outcomes. The findings on the approved teacher establishment and number of teachers teaching Grade 3 as reported by the headteachers are presented in Figures 93 and 94.

Figure 93: *Teacher Establishment*



	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
1-10	38.6	0.0	44.4	39.4	0.0	0.0	32.2
11-20	52.3	0.0	44.4	57.6	43.8	75.0	46.1
21-30	4.6	50.0	0.0	3.0	37.5	1.0	11.1
31+	4.6	50.0	11.1	0.0	18.8	0.0	10.6

Figure 94: *Average Number of Teachers Teaching Grade 3*

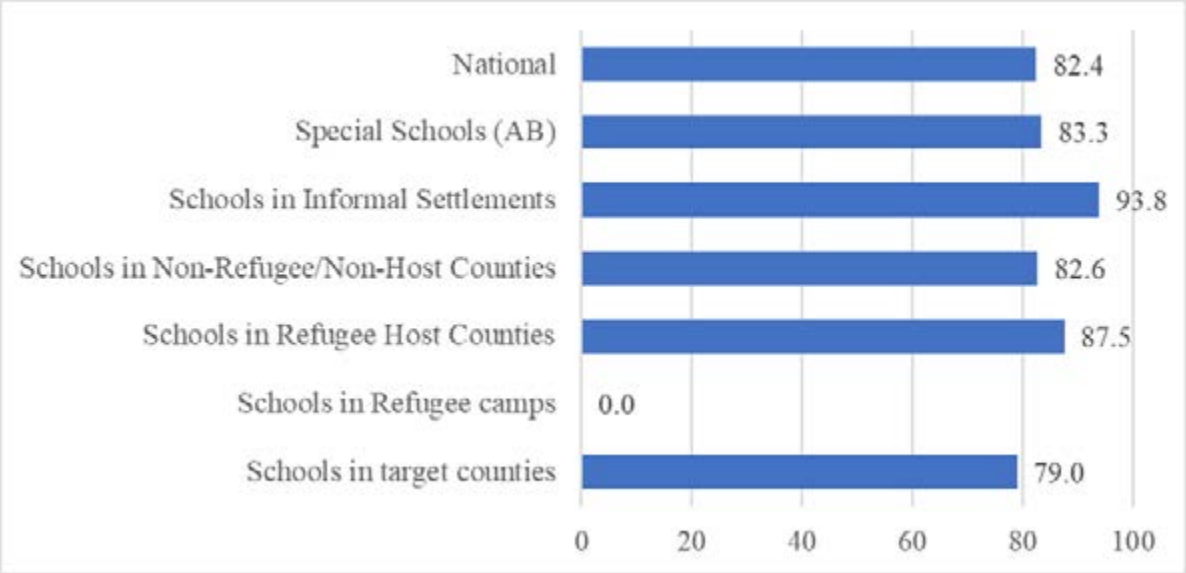


As shown in Figure 93, most schools have 11-20 approved teacher establishments. The approved teacher establishment has an influence on the total number of teachers in a school teaching Grade 3 which thus affects the learner to teacher ratio. Special schools (AB) had the highest average number of teachers teaching Grade 3 as observed in Figure 94. Disparities were observed in the number of female and male teachers teaching at Grade 3 across the categories of schools. This may be attributed to societal perceptions that associate nurturing and caregiving with women, leading to a belief that they are better suited for young children, combined with traditional gender roles that often link childcare with female responsibilities. It is encouraging to note that teachers in special schools specialize in areas of special needs education, hence, the higher the number of such teachers, the better the attention given to such special learners in pursuit of their academic performance.

7.4.2 Filling Lesson Attendance Registers for Teachers

Teachers and students' attendance in class predicts not just a student's performance but also long-term effects on the student's life and future. The current study therefore sought to establish whether learners fill teachers' lesson attendance registers. The findings are as presented in Figure 95.

Figure 95: *Filling of Lesson Attendance Registers for Teachers*

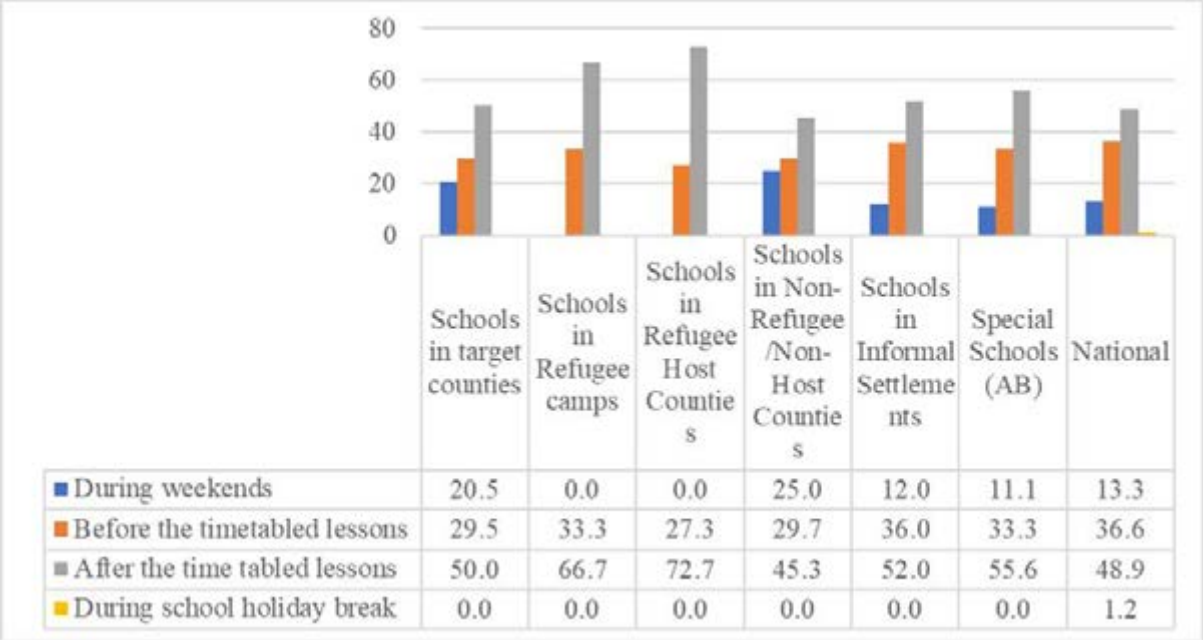


The findings in Figure 95 show that in a majority of school categories, learners fill teachers' lesson attendance registers. Of concern, however, are the schools in refugee camps where all headteachers (100.0%) indicated that lesson attendance registers were not filled by learners. The findings therefore point to the need for intervention in the schools where lesson attendance registers are not filled. Sawada and Ragatz (2015) point out that teacher absenteeism is very costly, and evidence suggests that teachers' absence affects students' attendance, which eventually profoundly affects students' average grade points.

7.4.3 Scheduling of Lesson Recovery Sessions

Lynch (2022) found that educational recovery should be prioritized. The study modeled how school leaders could optimize recovery within their context which was nationally and internationally significant. The findings are as presented in Figure 96.

Figure 96: *Scheduling of Lesson Recovery Sessions*



	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee /Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
During weekends	20.5	0.0	0.0	25.0	12.0	11.1	13.3
Before the timetabled lessons	29.5	33.3	27.3	29.7	36.0	33.3	36.6
After the time tabled lessons	50.0	66.7	72.7	45.3	52.0	55.6	48.9
During school holiday break	0.0	0.0	0.0	0.0	0.0	0.0	1.2

Figure 96 shows that the majority of headteachers reported their schools schedule lesson recoveries after the timetabled lessons. Scheduling lesson recovery after time tabled lessons has a bearing to teaching and learning in primary school.

7.4.4 Lesson Observation and Feedback from Education Officers

Headteachers were asked to state if lesson observations are conducted in their schools. The findings show that lesson observation is carried out in all primary schools (100.0%) and similarly across the school categories. This is an indication that lesson observation is a major strategy used to monitor teaching and learning activities in schools aimed at enhancing performance. Mulatya, et al (2021), found that there is a significant relationship between headteachers' observation of teachers' lessons and pupils' KCPE performance.

Further, the headteachers were asked to indicate how often the listed education officers observed lessons and provided feedback to teachers between 2021 and 2024. The findings are presented in Table 59.

Table 59: *Lesson Observation and Feedback from Education Officers (2021-2024)*

Lesson observation and feedback	How often	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
CSO	0	4.9	50.0	0.0	2.9	0.0	0.0	4.7
	1	9.8	50.0	0.0	8.8	6.7	0.0	7.1
	2	12.2	0.0	20.0	11.8	6.7	0.0	11.2
	3	24.4	0.0	20.0	26.5	20.0	0.0	18.8
	4 and above	48.8	0.0	60.0	50.0	66.7	100.0	58.2
SCQASO	0	18.2	0.0	0.0	22.2	0.0	0.0	11.6
	1	21.2	0.0	20.0	22.2	14.3	0.0	23.3
	2	27.3	0.0	20.0	29.6	42.9	0.0	21.2
	3	12.1	100.0	0.0	11.1	0.0	33.3	18.5
	4 and above	21.2	0.0	60.0	14.8	42.9	66.7	25.3
CQASO	0	33.3	50.0	0.0	39.1	7.7	0.0	23.7
	1	30.0	50.0	20.0	30.4	46.2	0.0	30.4
	2	6.7	0.0	20.0	4.4	7.7	0.0	11.9
	3	13.3	0.0	20.0	13.0	7.7	66.7	16.3
	4 and above	16.7	0.0	40.0	13.0	30.8	33.3	17.8
Officers from Sub-County	0	11.8	0.0	0.0	14.3	7.7	0.0	8.2
	1	20.6	0.0	25.0	21.4	23.1	0.0	22.5
	2	17.7	50.0	0.0	17.9	15.4	0.0	18.4
	3	29.4	50.0	25.0	28.6	7.7	33.3	27.9
	4 and above	20.6	0.0	50.0	17.9	46.2	66.7	23.1
Officers from County	0	16.7	0.0	0.0	20.8	7.7	0.0	21.6
	1	40.0	100.0	50.0	33.3	38.5	0.0	32.4
	2	6.7	0.0	0.0	8.3	23.1	0.0	18.0
	3	16.7	0.0	0.0	20.8	0.0	66.7	13.0
	4 and above	20.0	0.0	50.0	16.7	30.8	33.3	15.1
Officers from MOE Headquarters	0	29.0	50.0	20.0	29.2	9.1	0.0	30.2
	1	35.5	50.0	0.0	41.7	27.3	0.0	32.4
	2	19.4	0.0	40.0	16.7	27.3	0.0	16.6
	3	3.2	0.0	0.0	4.2	9.1	33.3	8.6
	4 and above	12.9	0.0	40.0	8.3	27.3	66.7	12.2
Officers from TSC Headquarters	0	37.5	100.0	0.0	40.0	9.1	0.0	36.7
	1	37.5	0.0	40.0	40.0	27.3	0.0	26.6
	2	6.3	0.0	20.0	4.0	27.3	0.0	13.0
	3	3.1	0.0	0.0	4.0	9.1	66.7	8.6
	4 and above	15.6	0.0	40.0	12.0	27.3	33.3	15.1

The findings on Table 59 show that different education officers visited schools to observe lessons and, in most instances, more than once. The CSOs visited schools more frequently as indicated by 58.2% of headteachers nationally who reported that CSOs made lesson observations and provided feedback at least four and above times in a year. The same was reported across the school categories as indicated by all headteachers (100.0%) of special schools (AB), 66.7% of heads of schools in informal settlements, 60.0% of heads of schools in refugee host counties and 50.0% of heads of schools in non-refugee host counties. SCQASOs made the second highest number of visits as reported by 25.3% of headteachers nationally, 66.7% of special schools (AB) and 60.0% of heads of schools in refugee host counties. Schools in informal settlements and non-refugee host counties recorded the highest share of schools receiving three or more visits for professional support, at 35.7% and 33.3%, respectively, suggesting a higher focus on these regions. It is of concern, however, that most schools in refugee camps and refugee host counties reported the least number of visits by education officers. Officers from TSC headquarters and MOE headquarters made the least number of visits to schools. The findings align with previous findings by Piper et al. (2018), who noted that instructional supervision in Kenya is often more frequent at the lower administrative levels. Ngware et al. (2020) found that higher-level education officials tend to have limited direct interaction with schools, often due to resource constraints and competing administrative responsibilities.

7.4.5 Frequency of Professional Support for Teachers in Schools

Teachers were asked to indicate the frequency of professional support in different areas. The findings are presented in Table 60.

Table 60: *Frequency of Professional Support for Teachers in Schools*

		Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
CBC support	Frequently	32.1	12.5	25.0	35.4	55.2	44.4	42.7
	Never	3.8	0.0	0.0	4.9	0.0	0.0	2.6
	Sometimes	39.6	50.0	37.5	39.0	20.7	22.2	32.2
	Very frequently	24.5	37.5	37.5	20.7	24.1	33.3	22.5
IBTS	Frequently	28.4	0.0	31.3	30.0	41.4	66.7	34.0
	Never	19.6	33.3	6.3	21.3	0.0	11.1	15.3
	Sometimes	37.3	33.3	31.3	38.8	31.0	22.2	35.8
	Very frequently	14.7	33.3	31.3	10.0	27.6	0.0	15.0
Teacher in-service training	Frequently	32.7	0.0	31.3	35.9	44.8	22.2	33.8
	Never	18.8	57.1	12.5	16.7	3.5	22.2	17.5
	Sometimes	40.6	28.6	37.5	42.3	41.4	44.4	36.4
	Very frequently	7.9	14.3	18.8	5.1	10.3	11.1	11.5
Financial management support	Frequently	22.1	0.0	12.5	25.9	20.7	11.1	23.8
	Never	28.9	57.1	31.3	25.9	24.1	33.3	25.5
	Sometimes	39.4	28.6	37.5	40.7	48.3	44.4	38.7
	Very frequently	9.6	14.3	18.8	7.4	6.9	11.1	11.5
CBA support	Frequently	26.9	12.5	18.8	30.0	64.3	0.0	36.8
	Never	13.5	12.5	6.3	15.0	3.6	12.5	9.8
	Sometimes	46.2	62.5	43.8	45.0	21.4	62.5	39.2
	Very frequently	13.5	12.5	31.3	10.0	10.7	25.0	14.3
QASO support	Frequently	34.3	12.5	37.5	35.8	44.8	66.7	40.3
	Never	10.5	37.5	6.3	8.6	3.5	0.0	9.8
	Sometimes	44.8	37.5	37.5	46.9	20.7	22.2	34.4
	Very frequently	10.5	12.5	18.8	8.6	31.0	11.1	15.5
Advisory visits	Frequently	22.3	0.0	18.8	24.4	48.3	62.5	36.2
	Never	12.6	0.0	18.8	12.2	3.5	0.0	9.1
	Sometimes	51.5	80.0	43.8	51.2	24.1	25.0	41.2
	Very frequently	13.6	20.0	18.8	12.2	24.1	12.5	13.5
Identification of intellectual challenges	Frequently	25.2	14.3	12.5	28.8	24.1	11.1	27.5
	Never	15.5	14.3	25.0	13.8	3.5	22.2	14.7
	Sometimes	53.4	42.9	43.8	56.3	62.1	66.7	50.5
	Very frequently	5.8	28.6	18.8	1.3	10.3	0.0	7.3
Training on child protections	Frequently	24.5	0.0	25.0	26.8	41.4	44.4	28.1
	Never	15.1	25.0	6.3	15.9	6.9	0.0	12.1
	Sometimes	51.9	62.5	37.5	53.7	37.9	44.4	49.2
	Very frequently	8.5	12.5	31.3	3.7	13.8	11.1	10.6
Training on GBV	Frequently	21.0	28.6	26.7	19.2	37.9	55.6	27.0
	Never	24.0	14.3	13.3	26.9	10.3	0.0	22.2
	Sometimes	46.0	42.9	26.7	50.0	41.4	44.4	43.1
	Very frequently	9.0	14.3	33.3	3.9	10.3	0.0	7.8
Head teacher support	Frequently	37.6	0.0	53.3	38.5	20.7	55.6	30.6
	Never	4.0	25.0	0.0	2.6	0.0	0.0	2.6
	Sometimes	14.9	25.0	13.3	14.1	6.9	11.1	10.0
	Very frequently	43.6	50.0	33.3	44.9	72.4	33.3	56.8
TPAD	Frequently	32.0	0.0	25.0	35.8	31.0	100.0	31.5
	Never	10.7	33.3	0.0	11.1	0.0	0.0	9.6
	Sometimes	20.4	50.0	25.0	17.3	3.5	0.0	13.3
	Very frequently	36.9	16.7	50.0	35.8	65.5	0.0	45.6

Data from Table 62 indicates that teachers frequently received support across various areas. Nationally, the highest proportions were recorded in Competency-Based Curriculum (CBC) at 42.7%, followed by QASO support at 40.3%, CBA support at 36.8%, and advisory support at 36.2%. Notably, 33.8% of teachers also frequently received in-service training, while 30.6% reported frequent headteacher support.

However, disparities emerged across school categories. In target county schools, 43.6% of teachers received headteacher support very frequently and 37.6% frequently, while TPAD

support was received very frequently by 36.9% and frequently by 32.0%. Schools in informal settlements recorded notably higher levels of support in certain areas, with 64.3% and 55.2% of teachers frequently receiving support in CBA and CBC respectively. Additionally, 41.4% of teachers in informal settlement schools frequently received training in child protection, a figure likely attributable to the elevated prevalence of child protection cases in these areas and the active presence of NGOs implementing targeted training programs.

Teachers in special schools consistently reported higher levels of professional support compared to their counterparts in other school categories. This can be attributed to targeted government policies and dedicated funding for inclusive education, complemented by NGO interventions focused on supporting vulnerable learners.

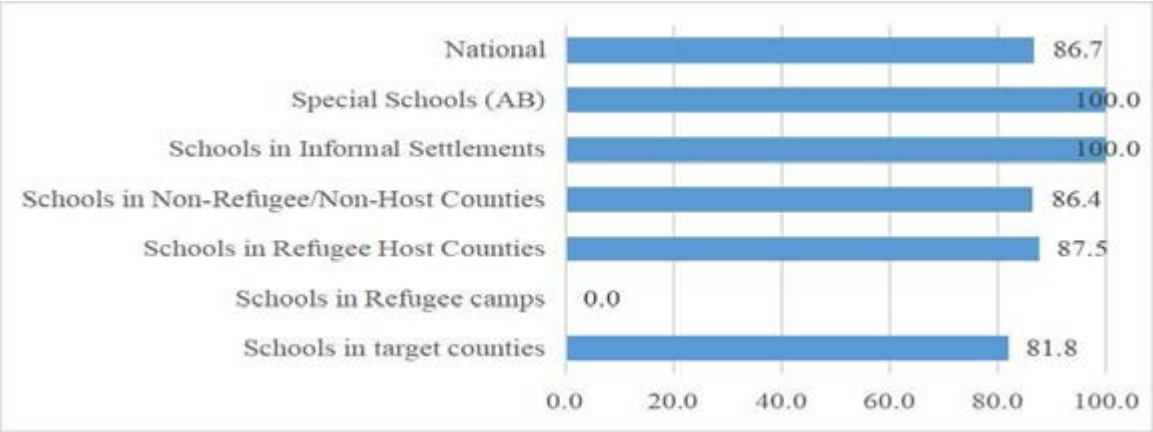
It is of concern that teachers in schools in refugee camps indicated that they do not receive support in teacher in-service training, financial management support, QASO support and TPAD support. Failure to provide support in in-service training and financial management support may have a bearing on implementation of the curriculum. These findings are consistent with Kisirkoi and Kamanga (2021), Wanzare (2012) and Wanjala & Simatwa (2019) who emphasize that while continuous teacher professional development is critical for effective curriculum implementation, gaps persist in assessment training.

Further, the study established that all headteachers nationally and in selected categories reported that lesson observation feedback is given in adoption of varied teaching methods, lesson time management, mastery of content, learner participation, assessment of content learnt and embedding of core competencies and values. Feedback was however not given on improvement of learning experience in refugee camp-based schools.

7.4.6 Staff Appraisal using TPAD

The study sought from headteachers if staff appraisal using TPAD are conducted in their schools. The findings are as presented in Figure 97.

Figure 97: *Staff Appraisal using TPAD*

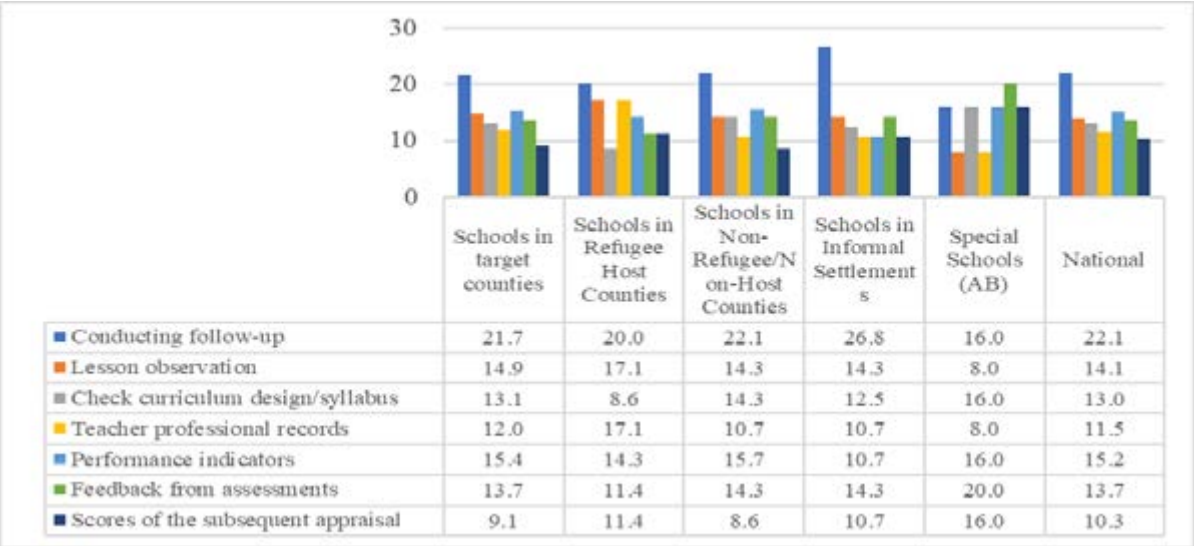


The findings in Figure 97 show that staff appraisal using TPAD is carried out in most schools as reported by 86.7% of headteachers nationally, all headteachers in special schools and schools in informal settlements, 87.5% of headteachers of schools in non-refugee host counties, 81.8% of headteachers of schools in target counties and 63.6% of headteachers of schools in refugee host counties. No headteacher in refugee camp schools reported using TPAD for staff appraisal, as these teachers are not TSC employees. However, attention should be paid to schools in target counties and schools in refugee host counties where 18.2% and 36.4% of headteachers respectively said staff appraisal is not conducted.

7.4.7 Measures to ensure that the Gaps are Addressed

Headteachers were asked to state measures taken to address the gaps identified from the teacher appraisals. The findings are as presented in Figure 99.

Figure 99: *Measures to ensure that the Gaps are Addressed*



	Schools in target counties	Schools in Refugee Host Counties	Schools in Non-Refugee/Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Conducting follow-up	21.7	20.0	22.1	26.8	16.0	22.1
Lesson observation	14.9	17.1	14.3	14.3	8.0	14.1
Check curriculum design/syllabus	13.1	8.6	14.3	12.5	16.0	13.0
Teacher professional records	12.0	17.1	10.7	10.7	8.0	11.5
Performance indicators	15.4	14.3	15.7	10.7	16.0	15.2
Feedback from assessments	13.7	11.4	14.3	14.3	20.0	13.7
Scores of the subsequent appraisal	9.1	11.4	8.6	10.7	16.0	10.3

The findings in Figure 99 show that a large share (22.1%) of headteachers nationally conduct follow-up to establish the extent to which the identified gaps have been addressed following appraisals using TPAD. This is followed by review of performance indicators as reported by 15.2% of the headteachers, then lesson observation, feedback from assessments, checking curriculum design/syllabus coverage, review of teacher professional records as reported by 14.1%, 13.7%, 13.0% and 11.5% of the headteachers respectively. A similar trend is observed across the school categories with a slight contrast from the special schools where the most cited strategy is feedback from assessments as cited by 20.0% of the headteachers.

7.5 Learner Management

7.5.1 Availability of a Functional Children's Leadership Body

The study answers the question on whether schools have a functional Children's body. The findings are presented in Figure 100.

Figure 46: *Availability of a Functional Children's Leadership Body*

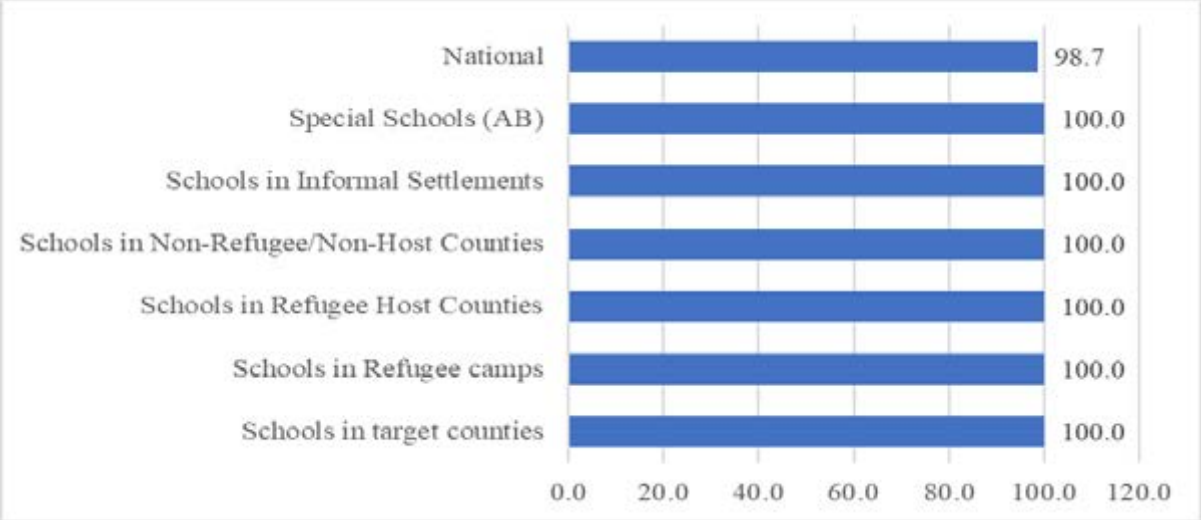


Figure 100 shows that all schools across the categories, and 98.7% nationally, have a functional children's body, indicating widespread compliance with the Basic Education Act, No. 14 of 2013, which outlines general principles related to student rights, including the right to participate in school governance. Regarding how class leaders are selected, the study found that this responsibility is assumed by teachers, learners, or both. When teachers lead the selection process, they tend to appoint leaders based on qualities such as discipline and responsibility, ensuring that capable learners take charge. When learners take the lead, they typically elect their representatives through voting, which promotes fairness and active participation. This dual approach reflects broader global trends in educational leadership. Harris and Jones (2020) note that teacher-led leadership selection is particularly prevalent in structured educational

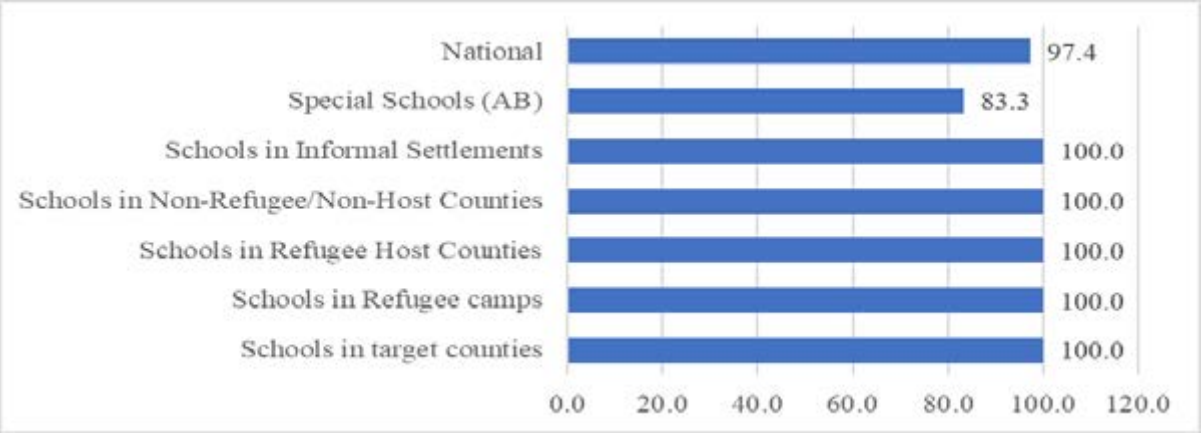
environments where authority figures play a central role in decision-making, and that in lower primary education, teachers often assume responsibility for leadership selection to maintain order and discipline. This pattern aligns with the present study's findings on the dominance of teacher-led selection in Kenyan schools.

The findings further show that most headteachers nationally and across school categories noted that to a large extent, the children's body has contributed to the day to day running of the schools. This is replicated across all the other school categories with the special schools (AB) having 100%. All the other categories are at (81.8%, 75%, 68.8% and 68.4%). This is an indicator that children's leadership bodies are promoting the learners' wellbeing in the schools. Analysis of learners' responses on class leadership further revealed that in class leadership, learners are assigned roles like prefects or monitors to assist in classroom management and support peers. This fosters responsibility, teamwork, and confidence while developing communication and problem-solving skills. By preparing learners for future leadership, it creates a structured and supportive learning environment.

7.5.2 Availability of Guidance and Counseling Committee

The study sought to establish the availability of guidance and counselling committees in schools. The findings are presented in Figure 101.

Figure 47: *Availability of Children's Leadership Body*



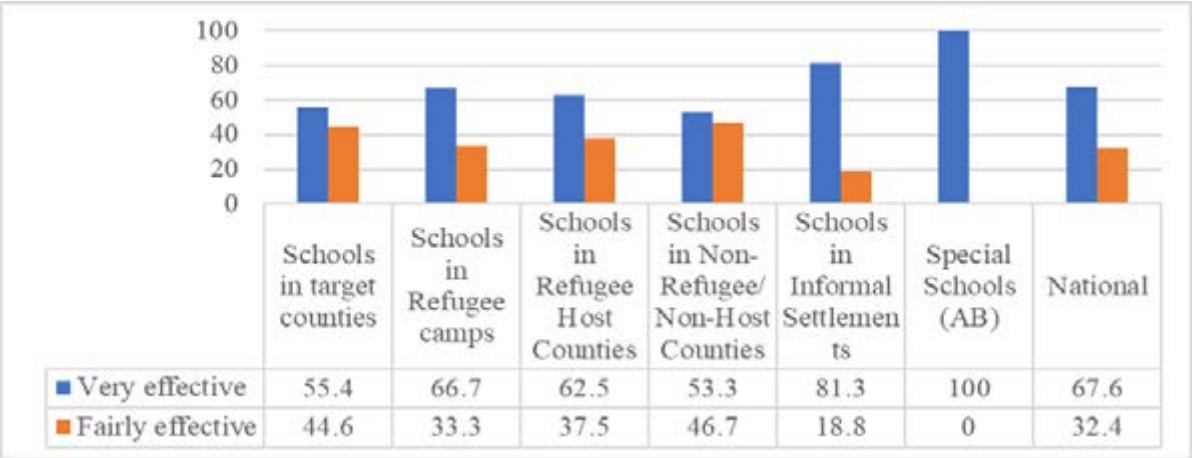
As observed in Figure 101, most schools across the categories have established guidance and counselling committees except special schools (AB) and national schools where 83.3% and 97.4% of schools respectively have these committees in place. The study further revealed that the three main areas addressed by guidance and counselling committees are boy-girl relationship followed by menstrual hygiene and then drugs and substance abuse as reported by 22.0%, 18.2% and 16.3% of the headteachers respectively. The same trend is evident across the school

categories. Bullying, cleanliness, theft and conflict resolution had a small percentage except for schools in refugee camps that posted a 22.2%.

7.5.3 Effectiveness of Guidance and Counseling Committees

The study sought to establish the effectiveness of guidance and counselling committees. The findings are presented in Figure 102.

Figure 48: *Effectiveness of Guidance and Counseling Committees*



	Schools in target counties	Schools in Refugee camps	Schools in Refugee Host Counties	Schools in Non-Refugee/ Non-Host Counties	Schools in Informal Settlements	Special Schools (AB)	National
Very effective	55.4	66.7	62.5	53.3	81.3	100	67.6
Fairly effective	44.6	33.3	37.5	46.7	18.8	0	32.4

From Figure 102 it is evident that the Guidance and Counselling committee was very effective in enhancing students' personal competencies nationally (67.6%) and across the school categories. All headteachers of Special schools (AB) reported that children's bodies are very effective, representing 100% of that category. This was followed by 81.3% of schools in informal settlements and 66.7% of schools in refugee camps. The remaining categories recorded lower proportions, at 63.6%, 62.5%, and 55.4%, respectively.

CHAPTER EIGHT 8

SUMMARY OF FINDINGS AND RECOMMENDATIONS

8.1 Introduction

This chapter provides a summary of the study findings, outlines the conclusions and suggests recommendations from the major findings. The study was guided by the following research objectives:

a. determine the achievement of high-order competencies in English and Mathematics of Grade 3 learners among the various sub-groups;

b. find out learner and teacher contextual factors that influence learner achievement;

c. establish the implementation of Competency Based Curriculum (CBC) and Competency-Based Assessment (CBA);

d. find out the availability and adequacy of school inputs and infrastructure;

e. assess issues of school management, teacher management, school-parent/guardian relations, community relations and school environment that influence learner achievement; and

f. determine the combination of inputs that are associated with Grade 3 learner achievement levels in Mathematics and English.

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f. determine the combination of inputs that are associated with Grade 3 learner achievement levels in Mathematics and English.

8.2 Summary of findings

8.2.1 Learner Achievement

Proportion of learners attaining minimum proficiency at different levels

Nationally, 41.4% of learners achieved the 50% benchmark at Level 4 in English Language Activities, where items required predicting possible responses for comprehension. However, performance varied across regions, with notably low proportions of learners achieving the minimum benchmark in West Pokot County (15.6%), Isiolo County (18.4%), and Turkana County (18.5%). Similarly, only 21.4% of learners in refugee host counties and 28.0% of learners with visual impairment in age-based special schools attained the benchmark.

In Mathematical Activities, 26.8% of learners nationally reached the 50% benchmark at Level 4. Low performance was observed in several target counties, including Marsabit County (14.0%), Busia County (16.4%), and Vihiga County (17.3%). Similar trends were noted in schools in informal settlements and refugee host counties where 24.6% and 26.5% of the learners achieved the 50% benchmark respectively.

Despite these gaps, midline findings show improvement compared to the baseline study. In English Language Activities, 43.7% of learners achieved the Level 4 benchmark in the midline study compared to 23.9% at baseline. Likewise, in Mathematical Activities, 27.1% reached the benchmark at midline compared to 15.8% at baseline.

Learner achievement in mean scores

Nationally, girls performed slightly better than boys in English Activities, recording a mean score of 17.3 compared to 16.5 for boys. A similar trend was observed in target counties where girls scored 15.8 against 15.0 for boys. However, among learners with visual impairments in special schools (age-based), girls recorded the lowest mean score (7.8) compared to 13.5 for boys. In Mathematical Activities, the national mean score was 17.3, with girls and boys performing at par. Special schools recorded the lowest mean score (15.0), where girls scored 15.6 and boys 14.1. Learners with visual impairment had the lowest mean score (13.9), while those with hearing impairment recorded the highest (15.5).

Regarding achievement by age, learners below 9 years achieved the highest mean scores in both English Activities (18.8) and Mathematical Activities (18.5), while learners above 10 years recorded the lowest performance; 15.8 in English Activities and 16.8 in Mathematical Activities.

At the county level, Nandi County recorded the highest mean score in English Activities (22.9), followed by Kajiado County (22.1) and Kirinyaga County (21.1), while Busia County had the lowest (9.9). In Mathematical Activities, Nandi County again recorded the highest mean score (21.8), followed by Kajiado County (20.7) and Garissa County (21.2), whereas Turkana County recorded the lowest mean score (14.2).

Learner Achievement by Content area

In English Activities, inference questions recorded the highest proportion of learners achieving the 50% benchmark nationally (81.0%), followed by prediction (72.8%), language structure

(72.1%), direct questions (70.6%), and vocabulary (67.0%). The lowest performance in vocabulary was observed in schools in refugee host counties (57.1%). In special schools (age-based), the lowest proportion was recorded in prediction (61.0%) among learners with hearing impairment.

In Mathematical Activities, geometry had the highest proportion of learners attaining the minimum competency across all school categories, while measurement recorded the lowest proportion nationally (39.2%), and across all categories of schools.

Foundation level- Stage based curriculum

At the Foundation Level under the stage-based curriculum, less than 50% of learners achieved the *Meeting Expectation* level in most pre-numeracy tasks in both the Baseline and Midline studies, indicating limited mastery of the assessed skills. However, pre-literacy performance improved from 42.8% at Baseline to 50% at Midline. Of concern, fewer than 30% of learners were reported to practice essential personal grooming habits such as cleaning the body and brushing teeth daily, highlighting gaps in the acquisition of key foundation-level life skills.

Multilevel analysis results

Learner gender and attendance were found to have an influence on achievement. In English Activities, girls are likely to score 0.66 points higher than boys. However, in Mathematical Activities, boys are likely to score 0.09 more points than girls. Additionally, learners who attend school regularly are likely to obtain 0.51 more points than their counterparts in English Activities.

Availability of Mathematics textbooks positively impact Mathematics scores. Learners who have Mathematics textbooks are likely to obtain 0.99 more points in English Activities than their counterparts without textbooks. Similarly, learners with Mathematics books are likely to obtain 0.56 more points in Mathematical Activities compared to their counterparts who do not have a mathematics textbook.

Higher dropout cases have a significant negative impact both in English and Mathematics scores. Learners in schools with higher dropout cases are likely to obtain 1.75 and 1.44 less points in English and Mathematics respectively than their counterparts in schools with lower dropout cases.

Learners taught by teachers who have attended more professional development sessions are likely to obtain 4.16 more points in English activities and 3.98 more points in Mathematics compared to their counterparts whose teachers have less professional development.

8.2.2 Learner contextual factors

On learners' gender, nationally, there were slightly more boys (50.4%) than girls (49.6%). In schools in refugee camps, there were more girls than boys at 50.5% and 49.5% respectively. A similar trend was witnessed in schools in informal settlements where girls were more than boys (52.0% vs 48.0%) as well as in special schools (61.5% vs 38.5%).

On age, the majority of learners (65.1%) nationally were age-appropriate at 9 to 10 years, while 32.1% were overage and 2.8% underage. Schools in refugee camps had the highest proportion of overage learners at 88.2% followed by schools in refugee host counties at 75.2%.

Regarding availability of regular meals, only 34.2% of learners eat breakfast daily, with fewer consuming lunch (29.3%) or dinner (31.9%). Notably, 4.6% of learners go all day without meals, especially in schools in refugee host counties (6.2%).

Pertaining to learners' primary language spoken at home, Kiswahili was reported as the most commonly used language by 40.4% of learners nationally, followed by mother tongue used by 38.3% of learners. Schools in refugee camps reported the highest proportion (61.5%) of learners using their mother tongue at home.

Regarding daily school attendance, the study found that 76.1% of learners nationally reported to have attended school everyday of the term. The lowest proportion of learners reporting to have attended school daily was observed in special schools at 71.2%. There is a notable proportion of learners who miss school in a term. Illness is the key reason for absenteeism as reported by 56.1% of learners.

Further, the findings show that 44.6% of learners reported having repeated a grade, with highest rates observed in schools in refugee host counties (57.6%) and those in informal settlements at 47.2%. Additionally, 55.5% of schools nationally had experienced drop out cases. The highest proportion as reported by Heads of Institutions was schools in refugee camps (100%) and schools in refugee host counties (75.0%). Poverty (12.7%), domestic responsibilities (11.2%) and sickness of learner/parent (9.0%) were the main reasons contributing to cases of dropout.

8.2.3 Teacher contextual factors

On teachers' gender, the study found that nationally, female teachers constituted the majority at 65.9%. The gender disparity was more pronounced in schools in informal settlement (83.9%) and in schools in refugee host counties (66.7%). In contrast, a relatively more balanced distribution was observed in schools in target counties, non-host counties and special schools.

Regarding professional qualifications, most Grade 3 teachers nationally had a P1 certificate as their highest qualification at 57.5%. Schools in non-refugee/non-host counties recorded the highest proportion of P1 teachers (71.6%), while refugee host counties reported a mixed profile, with 63.0% holding P1 and 20.0% possessing S1/Diploma qualifications. A smaller proportion (11.8%) of teachers nationally held Bachelor's degrees.

On teaching experience, 30.7% of teachers nationally had served 6 to 10 years. A notable proportion (14.2%) of teachers nationally, 38.7% and 54.6% of teachers in schools in informal settlements and special schools respectively had served for over twenty years. On the other hand, 29.5% of teachers nationally had served for 1 to 5 years.

The majority of teachers nationally (73.0%) were employed by the Teachers Service Commission (TSC). A smaller proportion (19.7%) were employed by Boards of Management (BoM). An additional 7.4 % were supported by other arrangements, including partner organizations, particularly in refugee settings.

8.2.4 Implementation of Competency Based Curriculum and Competency Based Assessment

Teacher Preparedness and their Role in CBC Implementation

Regarding teacher preparedness and their role in CBC implementation, the study established that nationally, most teachers are prepared to implement CBC, with 99.1% already trained on the curriculum. All teachers from schools in refugee camps and special schools reported to have been trained. The findings also revealed that there is a notable gap in regard to effectiveness of CBA training with 69.7% of teachers indicating that it was not effective. Although 50.9% of teachers feel that additional duties do not impact their teaching, those in schools in refugee camps (33.3%) and host counties (47.1%) are feeling the pressure. Of concern is the shortage of specialised staff required to assist learners with special needs. For example, sign language

interpreters comprise 1.9% of the workforce nationally, and the availability of such support is particularly lacking in schools in refugee camps and targeted counties.

Effective Lesson Delivery

On effective lesson delivery, nationally, curriculum designs were found to be available and in use at 95.2%. However, effective lesson planning lags in certain areas, particularly schools in refugee host counties where 77.8% of teachers consistently prepared lesson plans. Teacher absenteeism remains a concern, with a national rate of 44.4%, 75.0% in schools in refugee camps and 62.5% in schools in informal settlements. Absenteeism is primarily attributed to sickness (32.0%) and official duties (30.0%).

In terms of pedagogical practices, demonstrations are widely used as reported by 83.4% of teachers, while ICT integration remains limited across most school categories except in schools in refugee camps, where 44.4% of teachers reported its use. Homework and remedial lessons are generally offered, with 96.2% of teachers providing extra support, though 22.2% of teachers in schools in refugee camps do not.

Competency Based Assessment (CBA)

Over 80% of headteachers reported that teachers primarily use question and answer, oral/aural, and written tests for assessment, indicating continued reliance on traditional assessment methods. More than half also reported using projects, checklists, and observation schedules to some extent, showing gradual adoption of diverse tools. Notably, all teachers in schools in refugee camps reported that they do not use journals in assessment.

On assessment feedback, parents are the main recipients nationally (19.5%), with slightly higher rates in non-refugee/non-host counties (21.2%), target counties (20.0%), and special schools (18.5%). However, feedback sharing with parents is lower in schools in refugee camps (7.7%).

Parental Empowerment and Engagement

The findings show that schools are making efforts to strengthen communication with parents, with 49.6% of schools holding parent meetings three times annually. This practice is reported by 80.0% and 62.5% of headteachers in schools in refugee camps and in informal settlements respectively.

Parental support to school programmes is largely financial, with the highest contributions coming from payment of school levies, donations and fundraising, and provision of learning materials as reported by 22.0%, 20.0% and 17.0% of headteachers respectively. Other forms of support include participation in school feeding programmes, volunteering in school activities, and supporting infrastructure development.

Core Values, PCIs and ESD

Pertaining to core values, learners demonstrated strong acquisition, with exemplary performance in social justice and patriotism across most school categories. However, challenges were observed in special schools, where learners attained scores of 77.4% and 72.4% at "developing level" in the values of love and peace respectively. In schools in informal settlements, learners attained a score of 78.1% in the value of peace.

Awareness about Pertinent and Contemporary Issues (PCIs) was moderate across school categories, though gaps were noted in health awareness where learners scored 25.0%, 39.6% in child protection in schools in refugee camps, and 44.5% in social responsibility in schools in refugee host counties.

Implementation of Education for Sustainable Development (ESD) was strongest in curriculum and pedagogy at 86.0% and community engagement at 87.1%, showing strong integration of sustainability concepts into teaching and school-community partnerships. However, ESD institutionalization in governance, policy, and school culture remained weak at 62.4% nationally, with particularly low awareness in refugee-host counties (46.7%) and non-refugee/non-host counties (40.0%).

8.2.5 School inputs and infrastructure

On facilities and infrastructure, the study revealed that schools in refugee camps had comparatively better access to adequate facilities, with all headteachers reporting the availability of 16 out of 28 key facilities which included classrooms, playgrounds, latrines, guidance and counseling offices, and computers. However, facilities such as computer rooms, libraries, dining halls, isolation/sick bays and counseling offices were reported to be unavailable in schools in refugee host counties, schools in target counties, and schools in non-refugee/non-host counties.

Regarding availability of classrooms, it was observed that 93.7%, 91.9% and 88.9% of schools nationally, in schools in target counties and non-refugee/non-host counties respectively reported availability of classrooms. Nationally, the study also found availability of age-appropriate furniture and adequate classroom conditions, with desks present in 92.3% of schools and ventilation at 95%.

Infrastructure disparities were evident in schools in refugee camps, target counties, and special schools, with 14.6% of schools still using earthen floors and 1.3% using twigs or sticks for walls, compromising safety. While stone and brick walls dominated, 48.3% of schools nationally reported using iron sheets for walls, reflecting ongoing inequalities in the physical learning environment across school contexts.

With respect to classroom inputs, the study found availability of basic classroom inputs like teachers' guides (97.5%), desks (97.0%), textbooks (94.9%), and chalkboards (94.4%). However, access to digital and supplementary resources was low, with 42.9%, 31.1% and 19.1% reporting access to computers, internet and smartboards respectively.

In terms of teaching and learning facilities, the study found high availability of key classroom inputs, with 94.3% of learners reporting access to desks, 93.3% to Mathematics textbooks, and 93.1% to English textbooks. Exercise books (92.9%), pencils (90.2%), and chairs (86.0%) were also widely available. However, notable gaps emerged, with 38.7% and 35.7% of learners reporting the inadequate class readers and tablets, respectively.

On textbooks, the study revealed that while many schools (83.2% in English, 80.8% in Mathematics) had a learner-book ratio of 1:1 to 1:3, gaps remain, with 4.6% and 5.6% lacking textbooks. Special schools reported better book availability with 50% achieving a 1:1 book to learner ratio. However, schools in refugee camps and informal settlements faced significant shortages, where 70.2% and 67.7% of schools had English and Mathematics supplementary textbooks. All Special schools had English textbooks, while 87.5% and 78.3% of schools in informal settlements and target counties respectively had English textbooks. However, 60.0% and 66.7% of schools in refugee camps and host counties had English textbooks. Mathematics textbooks were available in 55.6% and 60.0% of these schools.

Nationally, the availability of essential learning materials (exercise books, pencils/pens, erasers, and rulers) was generally high, with over 82.7% of schools reporting adequate supplies. Exercise books were the most available (95.4%), followed by pencils/pens (93.8%). All schools in

refugee camps had availability of both exercise books and pencils/pens, while special schools reported the lowest availability (88.3% for exercise books and 66.7% for pencils/pens).

On library or book corner, a significant proportion of learners (69.3%) nationally reported having access to a library or book corner. Schools in informal settlements and special schools had higher availability (83.7% and 82.7%, respectively), while schools in refugee camps and target counties had lower availability (55.6% and 66.3%). Overall, 45% of learners across all categories did not have access to a library or book corner.

Nationally, tablets, LCD projectors, cabinets, and laptops were the most available ICT facilities, observed in 77.0%, 63.5%, 60.4%, and 58.1% of schools respectively. It was also noted that schools in refugee camps, target counties, and special schools had high tablet availability as observed at 100.0%, 86.4%, and 64.7% respectively. However, essential ICT facilities like smart boards and adaptive devices were less available nationally.

Regarding facilities and infrastructure for SNE learners, adequate lighting was reported in 56.8% of classrooms and 52.8% of pathways. However, auditory rehabilitation and physiotherapy rooms were available in only 4.7% of schools.

The availability and adequacy of environmental adaptation facilities were generally low, with 36.6% of schools having staff toilets nationally. Special schools reported availability of disability-related facilities at 66.7% including adapted staff toilets, accessible pathways, lighting in classroom and use of bright colours for learners with low vision. Schools in refugee camps had no environmental adaptations. Classroom adjustments like desk placement and adequate spacing were also low at 35.5% and 20.3% respectively.

Nationally, the availability of assistive devices and teaching resources was low, with the highest adapted being ICT equipment at 9.4%. It was further noted that Mathematical equipment was the most adequate at 72.7%.

Water and power availability were high, reported at 93.9% and 90.9% respectively. All schools in refugee host counties, non-refugee/non-host schools, and special schools had 100% availability. However, schools in target counties reported comparatively lower availability at 85.7%. Nationally, 67.7% of schools had running water, with special schools having higher availability at 83.3%.

On toilet facilities, over 90.0% of schools nationally reported availability of clean, secure, and well-maintained toilets, including separate facilities for boys, girls, and staff. However, 72.6% of schools lacked adapted toilets for learners with disabilities. Additionally, 45.7% lacked sanitary disposal bins, and 33.6% had no handwashing points, with schools in refugee host counties and informal settlements most affected. Overcrowding was also noted, with 33.6% of schools failing to meet recommended toilet-to-pupil ratios.

Concerning school meals, nationally, 79.8% of schools provided meals for teachers, while 66.1% offered meals for pupils. All schools in refugee camps and special schools had meals for pupils, but only 50% of schools in informal settlements did. Additionally, 80% of special schools and 71.4% of schools in informal settlements provided meals for teachers. The study also found out that 63.9% of schools nationally provided lunch, with special schools, schools in refugee host counties and refugee camps offering lunch at 100%, 77.8% and 71.4%, respectively.

8.2.6 School Management

On school management, the study found out that a majority (90.9%) of the headteachers met the minimum academic qualifications and had the requisite professional qualification to head a primary school. A significant number of headteachers had undertaken courses in Education Management, Guidance and Counseling, Financial Management, Teacher Professional Development and Institutional Leadership. Records available in most schools included duty rota, teachers' responsibility list and school rules, while the least available records were records of mitigation on identified absenteeism cases and records on orphans and vulnerable children.

Further, a majority of the schools had functional BoMs. A significant 33.3%,18.2%, 12.5% of schools in refugee camps, refugee host counties and non-refugee/non-host counties did not have School Strategic Plans (SSPs). In addition, it was reported that nearly all schools, nationally and across the school categories, had School Improvement Plans (SIPs). The priority areas in SIPs that were noted included; supporting effective teaching (14.5%) , enhancing learning outcomes in foundational numeracy and literacy (12.4%) , improving school environment (14.0%), Water Sanitation and Health (WASH) (12.4%) , and management and accountability (12.7%).

Concerning availability of legal and policy documents, schools across all the categories reported having a variety of legal documents, like Children's Act (2001), Public Health Act (2012), the Constitution of Kenya (2010), Basic Education Act (2013), Persons with Disabilities Act

(2003); among others. Further, it was reported that all the schools had school level policies, such as school feeding and child protection policies.

Pertaining to ICT integration, more than half (65.5%) of the schools have guidelines on ICT integration. There was widespread use of ICT in the school management practices in areas such as management of examinations and assessment, human resource management of teachers, staff appraisal and performance reporting, teacher professional development, and in communicating with stakeholders.

On teacher management, over 43.0% of the headteachers reported their schools to have between 11-20 teachers, with schools in refugee camps having the highest number of teachers at 21 and above. As regards TPAD, staff appraisals are carried out in most schools as reported by 86.7% of headteachers nationally, all headteachers in special schools and schools in informal settlements, 87.5% of headteachers of schools in non-refugee/non-host counties, and 81.8% of headteachers of schools in target counties. All schools across the categories, and 98.7% nationally, have a functional children's council which contributes to the day to day running of the schools.

8.3 Conclusion

8.3.1. Learners Achievements

The study concludes that learners performed better in Midline study compared to Baseline study implying that the interventions suggested after the Baseline study may have had positive effect on the achievement of learning outcomes.

The analysis shows that several factors affect English Activities and Mathematical Activities scores differently. For instance, attendance and homework duration significantly affect English scores but not Mathematics scores. Conversely, the availability of Mathematics textbooks influences the learning areas positively. School-level factors such as absenteeism, dropout cases and teacher professional development also play a significant role in both learning areas.

8.3.2 Learner and Teacher Contextual Factors

A majority of learners in Grade 3 are age appropriate except for learners in schools in refugee camps. Class repetition continues to be observed, coupled with teacher and learner absenteeism. Most teachers are registered with TSC, however, the majority of them have not pursued any

self-sponsored courses. Most learners in the stage-based curriculum spend between 3 to 4 years at the Foundation level.

8.3.3. Implementation of CBC and CBA

Overall, implementation of the Competency Based Curriculum (CBC) has some significant strengths, like extensive training coverage, active involvement of parents, a strong embrace of values among learners, schools adhering to curriculum designs, and professional documents being used by teachers for effective lesson planning and implementation. However, there are challenges, such as inadequate tailored training in Competency Based Assessment (CBA), heavy workloads, limited integration of ICT, inconsistencies in the feedback from assessments and teacher absenteeism which may impede full realization of the expected learning outcomes.

8.3.4. School inputs and Infrastructure

Classroom furniture, classrooms, playfields, and learners' latrines/toilets were relatively available. The study revealed that the availability and adequacy of critical infrastructure such as computer rooms, isolation/sick bays, libraries, and guidance and counselling offices remain limited which may negatively influence the implementation of the Competency Based Curriculum (CBC).

Mathematics and English books for Grade 3 were found to be inadequate, a situation that may deny learners opportunities to develop foundational literacy and numeracy skills thus affecting achievement of learning outcomes. Supplementary materials were reported to be accessible nationally, in special schools, schools in informal settlements and schools in refugee camps.

Unavailability and inadequacy of ICT resources may hinder the effective integration of digital learning, restricting learners' opportunities to develop essential 21st-century skills. There is a critical shortfall in essential accessible facilities in schools for learners with special needs and disabilities, thus compromising inclusivity. Also noted was inadequacy of water and power supply in schools which may negatively influence learning, school operations, safety, and learners' overall health and well-being.

8. 3. 5 School Management

The study concludes that most headteachers are academically and professionally qualified, and have pursued additional training in key management areas. However, record-keeping gaps exist, particularly in absenteeism mitigation and tracking of orphans and vulnerable children.

While most schools have functional Boards of Management and School Improvement Plans (SIPs), a notable proportion, especially in refugee camps, lack School Strategic Plans, pointing to a planning deficit in more vulnerable school contexts. SIPs largely focus on teaching quality, foundational learning, WASH and accountability.

Schools demonstrate broad awareness and possession of legal and policy frameworks, including child protection and school feeding policies, reflecting a reasonable level of policy grounding at the school level. ICT adoption in school management is fairly widespread, particularly in examinations, staff appraisal, and stakeholder communication, with nearly two-thirds of schools having formal ICT guidelines. This is a positive indicator of modernizing management practices.

Staff appraisal practices are well-institutionalized across most school categories. The high presence of functional children's councils is a strong indicator of participatory school governance.

8.4 Recommendations

8.4.1 Learners Achievements

1. Teachers should adopt learner-centred approaches to promote higher-order thinking skills and improve proficiency in English Activities and Mathematical activities.
2. The Ministry of Education should provide adequate teaching and learning resources such as textbooks, supplementary books and class readers as well as other resources.
3. TSC should enhance Teacher Professional Development to improve curriculum implementation.
4. Teachers should implement Individualized Education Programmes (IEP) to enhance the acquisition of independent living skills in learners at the Foundation level.
5. Schools should intensify instructional strategies that support oral language development, decoding, and comprehension, particularly in early grades to improve foundational literacy outcomes.
6. Ministry of Education should provide additional instructional resources, teacher support, and language development interventions in schools in refugee camps to address the comparatively lower learner performance.
7. Ministry of Education should enhance support for learners with special needs by strengthening specialized instructional approaches, providing assistive learning

materials, and enhancing teacher training in inclusive education, particularly for learners in special schools undertaking the age-based curriculum.

8. The Kenya National Examinations Council (KNEC) should continuously monitor literacy benchmarks using assessment results analysed at both school and system levels to inform targeted interventions aimed at improving learner achievement in foundational literacy domains.

8.4.2 Learner contextual factors

1. Ministry of Education should conduct awareness and advocacy on the no class repetition policy to ensure compliance.
2. Ministry of Education should develop and implement policies on education for gifted and talented learners.
3. Ministry of Education should to enhance sensitisation on parental engagement through capacity building of parents, teachers and community advocacy campaigns.

8.4.3. Teacher contextual factors

1. TSC should recruit and deploy more teachers in schools.
2. The Ministry of Education and TSC should enhance in-service training of teachers and allocate more resources to fund training.
3. The Ministry of Education should operationalise EARCs at the county level to enable early identification and interventions for learners with special needs and disabilities.

8.4.4 Implementation of CBC and CBA

1. The Ministry of Education and TSC should strengthen professional development programmes for teachers, with a focus on CBC and CBA.
2. TSC should enforce compliance with the Code of Regulations to curb teacher absenteeism.
3. The Ministry of Education in collaboration with the ICT Authority should provide adequate ICT infrastructure, internet connectivity, and specialized devices to support inclusive digital learning.
4. School Boards of Management should provide training and guidance to parents regarding the CBC, enabling them to better support their children's learning at home.

5. The Kenya National Examinations Council should capacity build teachers on innovative assessment methods.

8.4.5 School Inputs and Infrastructure

1. The Ministry of Education should ensure adequate and appropriate school inputs and infrastructure in all categories of schools.
2. The Ministry of Education should provide supplementary instructional materials in all categories of schools.

8.4.6 School Management

1. The Ministry of Education and TSC should implement affirmative action policies to increase female headteacher appointments, particularly in refugee host counties.
2. The Ministry of Education should establish mechanisms to deliver consistent professional support, mentorship, and appraisal to teachers in schools in refugee camps.

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