REPUBLIC OF KENYA

MINISTRY OF EDUCATION

MID-TERM PROGRESS REPORT OF THE KENYA NATIONAL EDUCATION SECTOR STRATEGIC PLAN (NESSP) 2018-2022

KENYA VISION 2030

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REPUBLIC OF KENYA

MINISTRY OF EDUCATION

MID-TERM PROGRESS REPORT OF THE KENYA NATIONAL EDUCATION SECTOR STRATEGIC PLAN (NESSP) 2018-2022

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FOREWORD

The National Education Sector Strategic Plan (NESSP) 2018-2022 is the blueprint of the policy priorities, programmes and strategies for the education sector. NESSP (2018-2022) has four key strategic objectives, which are: to enhance access and equity; to provide quality and competency-based education, training and research; to strengthen management, governance and accountability; and to enhance relevance and capacities for Science, Technology and Innovation (ST&I) in education, training and research for the labour market. The Plan captures the aspirations of Kenyans as enshrined in Articles 43(f) and 53(1) (b) of the Constitution. NESSP (2018-2022) is also aligned to the international, continental and regional commitments such as the Sustainable Development Goals (SDGs) and Continental Education Strategy for Africa (CESA 16-25).

The Plan has been reviewed to assess the progress made in implementation and achievement of planned results during the first half of the implementation period: FY 2018/2019 to FY 2020/2021. In addition, the review assesses the progress of implementation of the Competency Based Curriculum (CBC) and the Competency Based Education and Training (CBET), and gives recommendations on the deepening of these reforms. The review has identified key policy reforms: partnerships by the government, the private sector, development partners, and non-state actors as being among the enablers for the achievements during the period under review. The review also outlines the implementation challenges experienced and opportunities for fast-tracking the realization of results for the remaining implementation period.

This review has prioritized programmes to be implemented in the short-term, medium-term and long-term, for the realization of the vision of inclusive and equitable quality education, training and research for sustainable development. These include programmes on enhancing post-COVID-19 recovery and learning continuity and seamless transition in the implementation of the competency-based curriculum. This report is a product of a highly participatory and consultative process bringing together representatives from all the State Departments; the Teachers Service Commission; Semi-Autonomous Government Agencies (SAGAs) in the Ministry of Education; development partners, through the Education Development Partners Coordination Group (EDPCG); Civil Society Organization(s); research institutions and International Institute of Educational Planning (IIEP).

The review generally reveals Kenya is on track towards achieving inclusive and equitable quality education and training. However, there still exist challenges in retention, transition and completion as well gender and regional disparities. I call upon all education stakeholders to support the implementation of NESSP prioritized interventions.

Prof. George A. O. Magoha, EGH
Cabinet Secretary, Ministry of Education

PREFACE

Kenya recognizes the importance of stakeholders' consultations and engagement in planning and execution of its education sector plan. The Mid-Term Review (MTR) of NESSP (2018-2022) enables proper tracking of intermediate indicators as well as global educational statistical indicators. The critical role played by accurate, credible and real time data in planning, policy formulation, resource allocation and overall management of the education sector in Kenya cannot be gain said.

The overall objective of the Joint Sector/Mid-Term Review is to assess the progress in each thematic area in NESSP (Governance and Accountability; Access and Equity; Quality and Relevance; and Pertinent and Contemporary Issues). The Review identifies the progress made, challenges faced, lessons learnt and proposes recommendations for improvement.

The Mid-Term Review (MTR), which was due in mid-2020, was delayed by the outbreak of the global COVID-19 pandemic. Nonetheless, the process has gone on with consultations of InternationalInstitute of Educational Planning, education partners and other stakeholders, to ensure the goals andobjectives as outlined in the plan are tracked to inform necessary changes in the remaining NESSP period, and as a launch pad to the next sector plan.

This review is crucial in bringing together all the five State Departments, SAGAs and the Teachers Service Commission (TSC) in ensuring successful implementation of the Competency Based Curriculum (CBC) and Competency Based Education and Training (CBET). It is envisioned that the country will be able to produce a relevant work force, with skills and attitudes for global citizenship. Furthermore, the review provides key baseline information on the current status of the education indicators, in preparation for implementation of the pathways in CBC in the secondary and tertiary level institutions.

Finally, we wish to recognize the role played by all education partners and the technical directors from the five State Departments, SAGAs and TSC, in ensuring the completion of the Mid-Term Review, which will guide our aspiration as a nation, in the realization of the Kenya Vision 2030, the SDGs, the Africa Agenda 2063, and other national development agendas.

Julius Jwan, PhD, CBS
Principal Secretary, State Department for Early Learning and Basic Education

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Amb. Simon Nabukwesi, CBS
Principal Secretary, State Department for University Education and Research

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Dr. Margaret W. Mwakima
Principal Secretary, State Department for Vocational and Technical Training

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Principal Secretary, State Department for Post-Training and Skills Development

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Prof. Fatuma N. Chege, (PhD) FCCS, CBS
Principal Secretary, State Department for the Implementation of Curriculum Reforms

ACKNOWLEDGEMENT

The NESSP midterm review is a critical milestone in tracking progress of implementation of programmes and projects in the education sector. The compilationof this report is as a result of an intensive process of efforts and contributions from the technical working group, senior management and key stakeholders in the education sector. The Ministry of Education led and coordinated the preparation of the report through the Directorate of Policy, Partnerships and East African Community Affairs, and Directorates of Planning with technical and financial support from the Government of Kenya, Civil Society Organizations and development partners, particularly UNESCO.

The mid -term review of NESSP 2018-2022 was made possible through the able leadership of the Cabinet Secretary, Ministry of Education Prof. George Magoha, together with Chief Administrative Secretaries- Ms. Mumina Gallo Bonaya, Dr. Sara Ruto and Hassan Noor Hassan, Principal Secretaries- State Department for Early Learning and Basic Education, Dr. Julius Jwan; State Department for University Education, Amb. Simon Nabukwesi; State Department for Vocational and Technical Training, Dr. Margaret W. Mwakima; State Department for Post -Training and Skills Development, Mr. Alfred Cheruiyot; and State Department for the Implementation of Curriculum Reforms, Prof. Fatuma Chege.

Special appreciation goes to UNESCO and UNESCO International Institute of Educational Planning (IIEP) consultants for providing invaluable technical support in the review process. This went a long way in enriching and ensuring the report meets the thresholds. Also recognized are other education partners including UNESCO, Zizi Afrique, Kenya Institute for Public Policy Research and Analysis, WUSC, Elimu YetuCoalition, Each Right, Population Council, UNICEF and the Global Partnerships for Education for support at different stages of the review process.

Much gratitude also goes to the Technical Working Group comprising staff drawn from all the five State Departments, SAGAs of MOE and TSC. This team understoodhow critical this review is to MOE and gave their best time, talent and skills towards the compilation of this comprehensive report. I salute the Director and staff from theDirectorate of Policy, Partnerships and East Africa Affairs together with respective Directors of Planning for spearheading the report writing process to its conclusion.

The ministry remains committed to undertaking periodic NESSP reviews with a viewto improve education service delivery.

DR. ELYAS J. ABDI
DIRECTOR GENERAL OF EDUCATION

ABBREVIATIONS AND ACRONYMS

ACE	Adult and Continuing Education
APBET	Alternative Provision of Basic Education and Training
ASAL	Arid and Semi-Arid Land
BoM	Boards of Management
CBA	Competency Based Assessment
CBC	Competency Based Curriculum
CBET	Competency Based Education and Training
CDACC	Curriculum Development Assessment and Certification Council
CLRC	Community Learning Resource Centre
CPPMU	Central Planning and Project Monitoring Unit
DACE	Directorate of Adult and Continuing Education
DCSWR	Digital Content Services and Wireless Routers
DLD	Digital Learning Device
DUC	Differentiated Unit Cost
EARC	Education Assessment Resources Centres
ECDE	Early Childhood Development and Education
ECD	Early Learning Development
EGMA	Early Grade Mathematics Assessment
EYE	Early Year Education
ESD	Education for Sustainable Development
GER	Gender Parity Rate
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GPI	Gender Parity Index
GoK	Government of Kenya
HELB	Higher Education Loans Board
IBQA	Institutional Based Quality Assurance
ICT	Information, Communication and Technology
KCATS	Kenya Credits Accumulation and Transfer System
KCPE	Kenya Certificate of Primary Education
KCSE	Kenya Certificate of Secondary Education
KETREB	Kenya Engineering Technology Registration Board
KEYA	Kenya Early Years Assessment
KNQA	Kenya National Qualifications Authority
KNQF	Kenya National Qualifications Framework
KNPHC	Kenya National Population Housing Census
KNBS	Kenya National Bureau of Statistics
KTTC	Kenya Technical Trainers College
KNOCS	Kenya National Occupational Classifications Standards
KICD	Kenya Institute of Curriculum Development
KISE	Kenya Institute of Special Education
KSRAT	Kenya School Readiness Assessment Tool
LDD	Learning Digital Device
LLL	Life Long Learning
MoE	Ministry of Education
MLA	Monitoring Learner Achievement
MDCAs	Ministries, Departments, Counties and Agencies
NASMLA	National Assessment System for Monitoring Learners Assessment
NECEC	National Early Childhood Education Committee
NEMIS	National Education Management Information System
NER	Net Enrolment Rate
NESSP	National Education Sector Strategic Plan

NEQASF	National Quality Assurance and Standards Framework
NPs	National Polytechnics
NGO	Non-Governmental Organisations
OCS	Office of Career Services
OOSC	Out of School Children
PACE	Pan African Conference Education
PCR	Primary Completion Rate
PSEA	Primary School Education Assessment
PRIEDE	Kenya Primary Education Development Project
PTR	Pupil Teacher Ratio
PTSD	Post-Training and Skills Development
QASOs	Quality Assurance and Standards Officers
RPL	Recognition of Prior Learning
STEM	Science, Technology, Engineering, and Mathematics
SDG	Sustainable Development Goals
SBTSS	School Based Teacher Support System
SAGAs	Semi-Autonomous Government Agencies
SNE	Special Needs Education
ST&I	Science, Technology and Innovation
SDUE&R	State Department for University Education and Research
TDD	Teacher Digital Services
TVCs	Technical and Vocational Colleges
TTIs	Technical Training Institutions
TPAD	Teacher Performance Appraisal & Development
TOTs	Trainer of Trainers
TSC	Teachers Service Commission
TWG	Technical Working Group
TVET	Technical Vocational Education and Training
UNESCO	United Nations Education, Scientific and Cultural Organization
UNHCR	United Nations High Commission for Refugees
UNICEF	United Nations Children's Fund
VTCs	Vocational Training Centres
YMCA	Young Men Christians Association
YWCA	Young Women Christians Association

EXECUTIVE SUMMARY

The following is an overview of the main achievements, and challenges, in each of the sub-sectors covered in the report.

1. Governance and Accountability: The publication of the 2019 Annual Statistical Booklet represents a significant achievement towards the goal of enhancing the efficiency and effectiveness in the delivery of education services. As far as enhancing policy formulation and implementation is concerned, thirteen policies/ Regulations proposed in NESSP 2018-2022 have been developed or reviewed and ten additional policies not originally envisioned in the Plan also been developed. An implementation plan for NESSP was prepared, and an annual multi-year action plan was developed. Monitoring of planned activities was hampered by inadequate resources and the effect of COVID-19 pandemic. Other challenges include inadequate dissemination, monitoring, enforcement and coordination of policy implementation.

2. Pre-primary: Indicators on access to pre-primary education for children ages 4-5 are on track. In 2019, the gross enrolment ratio was 109.4%. There has also been a significant increase in the number of pre-primary learning centres, which facilitated enrolment growth. The female-to-male enrolment ratio has remained constant at .96, indicating that at a national level there are no significant disparities between male and female enrolment. However, distinct regional differences remain, with particularly low gross enrolment rates in north-eastern Kenya counties and refugee camps. There exist disparities in favour of boys in 23 counties. In terms of quality, the Competency Based Curriculum has been implemented at pre-primary level, a major achievement in the goal of enhancing quality andrelevance. The pre-primary pupil-teacher ratio (PTR) in public schools stands at 37:1, above the recommended 25:1 while that for private schools is 21:1 indicating that there are still distinct challenges in the provision of adequate personnel in public pre-primary schools. Several multi- sectoral policy guidelines have been developed, including The Early Childhood Education Act ,2021.

3. Primary: The primary completion rate has improved from 84% in 2017 to 85.4% in 2019**.** the primary level female-to-male enrolment ratio has remained at 0.97 over the review period with disparities in favour of boys in lower grades (0.93 female/male ratio in Grades 1 and 2). Notably, nineteen counties have female/male enrolment ratios below 0.96. The share of special needs education (SNE) enrolment has increased from the 2017 baseline of 1.2% to 1.6% in 2019. On the other hand, the Competency Based Curriculum has been implemented in all primary schools up to Grade 4 and capacity building of teachers and education officers on competency-based assessment was carried out. The public school's pupil to teacher ratio has decreased from 40.7:1 in 2017 to 38.6:1 in 2019, although some regional disparities persist. In 2019, six counties had PTRs above 50:1, the highest being in Turkana (80.3: 1) followed by Mandera (73:1). All public primary schools have received training in financial management aimed at improving school level governance and accountability. Overall, addressing educational disparities based on factors such as gender, location and socio-economic status remains a concern at primary education.

4. Secondary: Secondary Schools GER has been increasing since 2017 from 66.8% to 71.2% in 2019. There also remain large disparities between counties. In 2019, thirteen counties had secondary GERs below 50% including refugee camp schools with a secondary GER of 46% in 2020. Whereas there have been significant gains in secondary level retention and completion, the retention rate from Form 1 to Form 4 increased from 82% in 2017 to 103.3% in 2019, and secondary level completion increased from a rate of 81.6% in 2018 to 94.2% in 2019. KCSE achievement has been improving every year

since 2017, with 11.3% of students achieving an average mean grade of C+ and above. In 2018 those who scored C + and above stood at 13.7% and 18% in 2019. Boys are outperforming girls and this gap has increased over the review period. Students with disabilities share of enrolment remained low at 0.16% in 2019, the same percentage as that in the baseline year.

5. Adult and Continuing Education: ACE enrolment has significantly decreased over the review period, constituting of 43.3% decrease in enrolment from 227,322 in 2017/18 financial year to 128,878 in 2021/22 financial year. This is a continuation of a trend which began prior to the implementation of NESSP 2018-2022, caused by inadequate funding, low awareness about ACE programmes, lack of coordination of ACE providers, and mass retirement of instructors without replacement. Nonetheless, a greater proportion of ACE learners have achieved functional literacy since the baseline year, indicating some progress in terms of improving programmes' quality, with 8% achieving functional literacy in 2017, 16% in 2019 and 12% in 2020. Inadequate funding, insufficient number technical personnel and low enrolment in ACE programmes persists as the major challenges for the sub-sector.

6. Inclusive Education for Learners and Trainees with Disabilities at Basic Education: There have been some advancements in the enrolment of learners with special needs at primary level, with the proportion of learners with special needs within total public primary enrolment increasing from 1.2% in 2017 to 1.6% in 2019, corresponding to an increase of 27,860 learners. At secondary level there has not been substantial progress, with the proportion of SNE learners enrolled in public schools being still at 0.16% in 2019, the same as the baseline year. Progress will have to accelerate in both levels in order to enhance inclusive education. However, there has been progress in the adaptation of curriculum materials for SNE learners, particularly at pre-primary and primary levels, which had adapted 80% of the curriculum in 2020. The pace has been slower at secondary level, which adapted 40% of materials in 2020.

7. Teacher Education, Professional Development and Management: The pupil-teacher ratio in public primary schools has improved from 40.7:1 in 2017 to 38.6:1 in 2019. There are still disparities in teacher distribution among counties, with 21 counties above the 40:1 target PTR in 2019, including six with public PTRs above 50:1. There is need to improve equity and inclusivity in the utilization of teachers. Some of the reforms meant to align pre-service teacher training with the new Competency Based Curriculum have been implemented, including the development of a curricula and assessment framework. Other activities include establishment of school and cluster level professional learning communities and development of an online Teacher Performance Appraisal and Development system. Teacher shortages remains a challenge, with 70% of primary schools and 84% of secondary schools presenting shortages in 2020. In addition, schools in refugee camps have a shortage of qualified teachers.

8. Technical and Vocational Education and Training (TVET): There has been sustained significant growth in TVET enrolment during the review period, with a 43.17 % growth between the baseline year and 2020. The establishment of three centres of excellence and the recruitment of 1,000 trainers per year during the review period. There have also been advancements towards the enhancement of TVET governance and accountability, with 70% of institutions receiving training on financial management in 2020. With regard to gender parity in TVET training and programmes, female to male enrolment ratio decreased from 0.79 in 2017 to 0.75 in 2019.

9. University: Enrolments in university have decreased during the plan period, from 547,316 students in 2017 to 540,876 in 2019, corresponding to a decrease in GER from 5.3% to 4.9%. However, there has been an increase in the total number of university academic staff from 12,662 in 2017 to 20,489

in 2019, a 62% increase. The gross staff to student ratio in public universities has concurrently improved, from 1:36 in the baseline year to 1:26 in 2019, a significant achievement, already better than the 2022 target. Nonetheless, equity in university enrolments still remains a concern, as the GPI in 2020 was the same as that of the baseline year, at 0.71.

10. Science, Technology and Innovation: In terms of outputs, ST&I priorities were published in the National Research Priorities (2018-2022) booklet which represents an achievement in the development of frameworks related to ST&I priority areas. STEM programmes targeting girls were implemented including the National STEM Mentorship Programme for secondary school students and the Young Scientists Kenya (YSK), contributing to the goal of enhancing equity and inclusion in ST&I. However, there is still lack of programmes targeting adult women's participation in ST&I. There has been progress towards strengthening governance and accountability, such as development of ST&I policy. Nevertheless, many related governance activities remain uninitiated due to limited budget among others.

11. Post-Training and Skills Development: Policy frameworks for work-based learning labour market placement and other systems linking training to industry are in the process of being developed, such as the National Skills Development Policy and guidelines, for the Office of Career Services Regulatory Framework. As far as the goal to enhancing governance is concerned, a draft organizational structure for the sub-sector has been developed and is expected to be operational by 2022. The development of the National Skills Management Information system is underway.

12. Quality Assurance and Standards: The National Education Quality Assurance and Standards Framework (NEQASF) was developed, a major achievement in enhancing quality and maintenance of standards. There has also been capacity building of QASOs on the NEQASF and implementation of competency-based curriculum. The roll-out of Institutional Based Quality Assurance (IBQA), including the dissemination of the manual and training of stakeholders is in progress. Lack of funds has hindered the progress of planned activities, such as embedding the IBQA in the NEQASF.

13. Kenya National Qualifications Framework (KNQF): The Kenya National Qualifications Framework (KNQF) was operationalized in 2018 where the KNQF 2018 Regulations were developed and its implementation is on course. A total of ten (10) National Policies, Standards and guidelines to inform implementation of the National Qualifications Framework were developed to enhance career progression and pathways. One Thousand, three hundred and eighteen (1318) NationalQualifications and nine (9) Qualifications Awarding Institutions (QAIs) were accredited and registered in the KNQF. Further, a total of forty-six (46) institutions including QAIs, professional bodies, Education and Training providers were sensitized on the role of the KNQF during the period. A National Qualifications Management Information System (NAQMIS) has been developed for storage and access of learner's records.

14. Cross-cutting and Contemporary Issues: There was progress in the integration of contemporary issues and values in the education and training sector during the review period. This includes the development of a Global Citizenship Education manual, the development of the Child Safety & Security manual against violent extremism and capacity development of students, teachers, education staff and parents on conflict prevention and management. There also has been considerable progress toward inclusion of refugees in the national system in the recent years. At present, all camp-based schools follow the Kenyan curriculum and sit for Kenyan national examinations. Refugees have been included in national scholarship programmes, and participate in co-curricular activities. Progressively, refugee learners are also being included in the National Education Management Information System (NEMIS).

1.0 PART I: INTRODUCTION

1.1 Background

The Ministry of Education (MoE) developed the National Education Sector Strategic Plan (NESSP) 2018-2022 to guide the implementation of priority reforms in the education sector, through a consultative process. The NESSP highlights the major challenges faced by the education sector in Kenya and prioritizes a series of policy goals and objectives to be achieved over a period of five years. It proposes strategies and financing options for the realization of such objectives for education programmes from Pre-Primary to University level and addresses issues of Access and Equity, Quality and Relevance, Governance and Accountability in the delivery of education and training.

Objectives of NESSP 2018-2022

The objectives of NESSP are to:

i. Enhance access, equity, quality and relevance in education, training and research;
ii. Promote the provision of competency-based education, training and research;
iii. Strengthen management, governance and accountability in education, research and training; and
iv. Enhance relevance and capacities for Science, Technology and Innovation (ST&I) in education, training and research for the labour markets.

An important component of NESSP 2018-2022 is the monitoring and evaluation system. Under this system, three types of reviews were to be conducted:

i. Annual reviews at the national, county and institutional levels for feedback and refinement of policies, programmes and indicators;
ii. Mid-term and quarterly reviews to provide an opportunity for work-plan adjustments and to ensure that outcomes remain consistent with changing national priorities; and
iii. End-of-cycle evaluation to consider achievements and constraints to inform the design of new projects, programmes and initiatives.

The last joint education sector review in Kenya was conducted in 2016. Since the development of NESSP 2018-2022, key education policy and legal reforms have been enacted at the sector level, nationally and internationally. One of the key national policy reforms is the approval of the Sessional Paper No. 01 of 2019 on 'Policy Framework for Reforming Education and Training for Sustainable Development'. The emergence of the COVID-19 has brought a paradigm shift on curriculum delivery, learning assessments, teacher development and management, inclusion of refugee education in the national systems, as well as quality assurance and standards. COVID-19 phenomenon brought in new inter-sectoral linkages to cope with the Ministry of Health guidelines; the Water and Sanitation Sector, the Health Sector and the ICT Sector are among the key sector that are now participating directly in learning activities. These aspects require a relook at the current NESSP to realign the planned activities to the new realities. Coupled with the new developments, the review assesses the progress of implementation of the Competency Based Curriculum (CBC), together with the Competency Based Education and Training (CBET) and give recommendations on the deepening of these reforms.

1.2 Objectives of the Mid -Term Review

The overall objective of the Joint Sector/Mid-Term Review is to assess the progress in each thematic area in NESSP (Governance and Accountability; Access and Equity; Quality and Relevance; and Pertinent and Contemporary Issues). The Review identifies the progress made, challenges faced and propose recommendations for improvement.

The specific objectives are to:

i. Establish progress in each thematic area in NESSP (governance and accountability; access and equity; quality and relevance; and pertinent and contemporary issues);
ii. Assess the impact of emerging issues in education and training and plan for the implementation of mitigation programmes and policies; and
iii. Provide opportunities for government and partners to engage in dialogue on the future of education, training and research.

1.3 Methodology

The Ministry in collaboration with county governments, development partners, non-governmental organizations, civil society conducted a desk review and focused discussions to establish the status of NESSP 2018-2022 implementation. The Technical Working Group (TWG) in collaboration with IIEP, Zizi Afrique, GIZ and WUSC organized a workshop to consolidate the data and information from the desk review and from the focused stakeholder group discussions. The success of measuring NESSP 2018-2022 is based in the results framework which brings out some key performance indicators as shown in Annex III. TWG has used the lessons learned and recommendations to update the NESSP Costed Implementation Plan for the remaining period of 2021/2022 to 2022/2023. The Mid- Term Review of the NESSP 2018-2022 cover status of the sub -sectors in MoE and mainly focus on education and training performance at outcome level for the period 1st July, 2018 to 30th June, 2021.

2.0 PART II: PROGRESS IN THE IMPLEMENTATION OF THE NATIONAL EDUCATION SECTOR STRATEGIC PLAN (NESSP) 2018-2022

2.1 Governance and Accountability

2.1.1 Policy Priority 1: Efficiency and Effectiveness in the Delivery of Education Services

Goal: Enhance efficiency and effectiveness in the delivery of education services at all levels. Policy Target (s): Align all the sub sectors towards delivery of quality education promise to learners and students. Programme 1.1: Improve Institutional Linkages and Efficiency in the Sector. Programme 1.2: Human Resource Management in the Education Sector. Programme 1.3: Data Management in the Education Sector. Programme 1.4: Strengthening Devolved and Decentralized Educational Structures.

During the first two years of NESSP 2018-2022 implementation, important steps were taken to enhance efficiency and effectiveness in delivery of education services. One such achievement has been the publication in 2019 of the Annual Statistical Booklet, which provided relevant data for all basic education levels for 2017-2019, allowing for better informed planning and management by the Ministry of Education. The booklet included key indicators such as the number of institutions, enrolments, schooling profile, internal efficiency, student-to-teacher ratio, student-to-textbook ratio, school infrastructure and examination performance. In the remainder of NESSP implementation, information from other sub-sectors could be integrated (TVET and University) to allow for a more comprehensive depiction of education indicators.

On data management, the Ministry has undertaken various activities; such as upgrading LAN at the headquarters, capacity building of all technical officers and teachers on the use of the system. The state department of early learning has utilized data from National Education Management Information System (NEMIS) to facilitate learners at secondary school level access to medical cover in any accredited health facility in Kenya. Secondly, data from NEMIS has been utilized for disbursement of learner capitation grants and form one placement for secondary schools. Currently, MoE is undertaking a NEMIS strengthening exercise in three areas: (i) data security; (ii) defining new user requirements, including accountability of data by the users; and (iii) acquisition and installation of additional data systems infrastructure at a secondary site (existing Government cloud infrastructure) for data backup and data storage support (maintenance, reliable power and air conditioning for the servers), as well as enhanced system security. Gradually, NEMIS is expected to be linked to key data points such the learning assessment and teacher information platforms. The Ministry has further utilized data and evidence for provision of capitation grants to all schools including institutions for special needs. Data has also been in allocation for infrastructure development, WASH programmes, school feeding programmes, provision of sanitary towels, deployment of teachers, among others. Similarly, it has been utilized to inform policy and practice.

With regard to human resource management, the ministry has continued to implement Quality Management System (QMS) Standard that guide management of quality of services in the wider public service. 300 staff had their capacity built on the requirements and implementation of the revised Quality Management System (ISO 9001: 2015 Standard) and information security management systems.

On strengthening devolved and decentralized education structures, performance contracts for county education personnel were introduced with an aim of improving service delivery at the sub county and school level. A capacity building framework and a cost operational plan for county education teams

was established. Further, annual county education dialogues were held in each county under PRIEDE Project. The capacity of county and sub county education officers was built on Competence Based Curriculum (CBC) and Competency Based Assessment (CBA). The field education officials oversee the implementation of education policies and programmes. In addition, MoE has continued to strengthen the governance capacity through training of CEBs and BoMs in the secondary schools. The Ministry also undertook training of primary schools' management on policy guidelines on management and accountability of the students' capitation grants to enhance governance and service delivery. The county governments have been organizing annual conferences to showcase county achievements and innovations in education that can facilitate cross-county peer learning.

The achievements in this target were enabled by existing structures from the national government to the grass root. Some of the challenges faced during the implementation of planned activities include inadequate internet connectivity in certain regions, inadequate power supply and inadequate capacity among users, among others. In the next NESSP implementation period, there will be a need to re-engineer NEMIS to school based fit for 2-6-6-3 education system.

2.1.2 Policy Priority 2: Enhance Policy Formulation and Implementation for Effective Education Service Delivery

Goal: To develop implementable policies for education and training. Policy Target (s): Develop and review policies and legislations by 2022. Programme 2.1: Enhance the Development and Implementation of Education Policies. Programme 2. 2: Enhance Collaborations and Linkages in Education and Training

NESSP 2018-2022 identified the need to develop or review the legal and policy frameworks in order to drive key reforms in the education sector. Thirty-three policies, guidelines and regulations were proposed in NESSP for development/ review. As of FY 2020/2021, thirteen (13) policies/ regulations proposed in NESSP were developed/reviewed including a comprehensive education and training policy and the national qualification framework. An additional ten (10) were developed due to emerging policy needs. Table 1. Shows policies, guidelines, legislations and regulations developed and issued between 1st July, 2018 to 30th June, 2021.

Table 1: Legislations, Regulations, Policies and Guidelines developed or reviewed

Year	Legislations, Regulations, Policies and Guidelines developed or reviewed
2018/2019	Education sector policy for learners and trainees with disabilities. Basic Education Competency Based Curriculum Framework. Education for Sustainable Development (ESD) policy. School health policy. National curriculum policy. Office of Career Services guidelines. KICD Act, 2013 amended 2018.
2019/2020	Sessional Paper No. 01 of 2019. Mentorship policy for basic education. Mentorship guidelines. National apprenticeship programmes guidelines. National Young Innovators Entrepreneurship Programme Guidelines.

Year	Legislations, Regulations, Policies and Guidelines developed or reviewed
	Universities Act, 2012 amended 2019.
2020/ 2021	Guidelines and materials for learners on life skills and values education. Internships Policy for Teachers. Child safety and security against violent extremism manual. National re-entry guidelines for schools. National quality assurance framework. Policy guidelines for utilization of learner capitation grant and other school funds. Kenya basic education emergency response plan 2020. Guidelines on safety and health protocols for reopening of basic education institutions. Physical education and sport policy. Guidelines on management of alcohol and drug abuse in learning institutions.

Additionally, the Basic Education Act No. 14 of 2013 and the Universities Regulations, 2012 were reviewed awaiting approval. Due to target government priorities and emerging issues, other policies and guidelines were developed and issued. For instance, the Education Sector Policy for Learners and Trainees with Disabilities; the National Curriculum Policy; the Guidelines on Safety and Health Protocols for Reopening of Basic Education Institutions, among others. All policies and regulations developed are uploaded on the Ministry website https:/www.education.go.ke. The sector has also established a unit for communication and a resource centre where policies and other education communication materials are found for utilization. The implementation of policies, guidelines and regulations has enhanced education service delivery and the target is on track. Summary of number of policies developed as planned, and those developed to address emerging needs.

With regard to enhancing collaborations and linkages in education and training, the sector recognizes the role of partnerships in enhancing access, equity, quality and relevance. The Plan identified the need for establishing a conducive environment for facilitating partnerships between both levels of Government, household and local communities, industry and commerce, private sector, development partners, NGOs and foundations. During the review period, partners in education and training were mapped annually and a resource mobilization strategy developed. A draft coordination framework to create linkages with county governments, private sector and development partners was developed. In the next plan, there will be a need to create an automated collaboration and linkage platform in order to enhance efficiency. Based on the progress, the sector has continued to enhance collaborations and linkages in delivery of education services and this target is on track.

Enabling Factors and Opportunities for the Achievement of Objectives

The achievements of these targets could be attributed to: greater partnerships and linkages with education stakeholders; goodwill from government and partners; and conducive work environment among others. However, the sector faces challenges in disseminating its policies, monitoring the status of policy implementation, enforcement mechanisms on compliance with policy and regulatory requirements. The emergence of COVID-19 pandemic led to increased use of technology in learning, enhanced digital knowledge and skills, increased research and utilization, and enhanced global interaction on education management and service delivery.

Challenges Faced in the Implementation of Planned Activities

In its endeavor to enhance service delivery, the sector faced challenges that could be attributed to inadequate funds to undertake policy related interventions. In addition, the coordination of multiple players in delivery of education services remains a challenge. Other challenges include overlapping and duplication of mandates leading to uncoordinated delivery of service. The COVID-19 pandemic affected the development and implementation of planned activities due to the emerging need to address COVID-19 related interventions.

2.1.3 Policy Priority 3: Establish a Framework for the Implementation of the NESSP 2018-2022

Goal: Establish a Framework for Implementation of the NESSP 2018-2022. Policy Target (s): A fully functioning multi-agency secretariat to implement NESSP 2018/2022. *Programme 3.1: Establish a Framework for the Implementation of NESSP 2018-2022.*

In order to guide and support the implementation of NESSP 2018-2022, under this programme it was planned to:

a) Develop and implement a framework to guide the implementation of NESSP;
b) Establish a multi-agency secretariat to spearhead the implementation of NESSP; and
c) Develop a monitoring and evaluation framework for NESSP.

An implementation plan for NESSP was prepared and a multi-agency secretariat to spearhead the implementation of NESSP was constituted. An annual multi-year action plan was developed for the implementation of NESSP and annual monitoring reports have been generated. However, monitoring of planned activities was hampered by inadequate funding, COVID-19 pandemic and low prioritization. In the next period for NESSP implementation, there will be a need to create an automated collaboration and linkages platform and develop a comprehensive monitoring and evaluation framework to track progress.

Priorities for the Implementation of NESSP during the Period 2021/2022 to 2026/2027

Based on the status of the implementation of NESSP, the sector will focus on the completion of the targeted priorities as indicated in NESSP 2018-2022. Consequently, new strategies will be employed to Fastrack achievements of the expected learning outcomes. The prioritized and categorized interventions are shown in Table 16.

2.2 Pre-Primary Education

2.2.1 Policy priority 1: Access and participation in inclusive and quality pre-primary education

Goal: Improve access and participation rate in competence-based learning for children aged between 4 to 5 years. Policy Target(s): Increase Pre-primary Gross Enrolment Rate (GER) from 76.6% to 83% by 2020. Ensure 100% transition from pre-primary to primary education across the country. Programme 1.1. Universal Pre-Primary Education Programme 1.2. Improve Health, Nutrition and Protection of Pre-primary Education Learners.

A significant increase in the number of pre-primary learning centres during the observed period facilitated the growth in enrolment. As Table below shows, the number of public and private centres rose from 41,779 in 2018 to 46,530 in 2019, an 11.4% increase, with newest centres established between 2018 and 2019. In 2019, 60% of the centres were public, accounting for 70% of total pre-primary enrolment.

The GER for pre-primary education registered improvement from 76.6% in 2017 to 109.4 % in 2019 with a specific GER of 107.8% for PP1 and 111.1% for PP2. The Net enrolment Rate also slightly improved, from 76.9% in 2017 to 77.2% in 2018. However, the enrolment declined by 19%, from 3.39 million learners in 2018 to 2.738 million in 2019. Gross enrolment ratios were slightly higher for male pre-primary learners (110.2%) compared to female learners (108.6%), resulting in a GPI of 0.986%. These figures are well beyond the final 2022 GER target of 83%. While encouraging, these figures cannot be compared with those of previous years, as the 2019 data only include children in PP1 and PP2, while previous years' reports included children in baby class. Thirty-one counties have pre-primary GERs above 100%, reaching as high as 188% in Busia and Samburu, and 190% in Siaya. In contrast, North-eastern counties generally have very low rates, as shown in Figure 1. The lowest GERs are in Wajir (36.6%), Garissa (38.8%) and Mandera (41.6%) counties, accompanied also by Nairobi (39.2%).

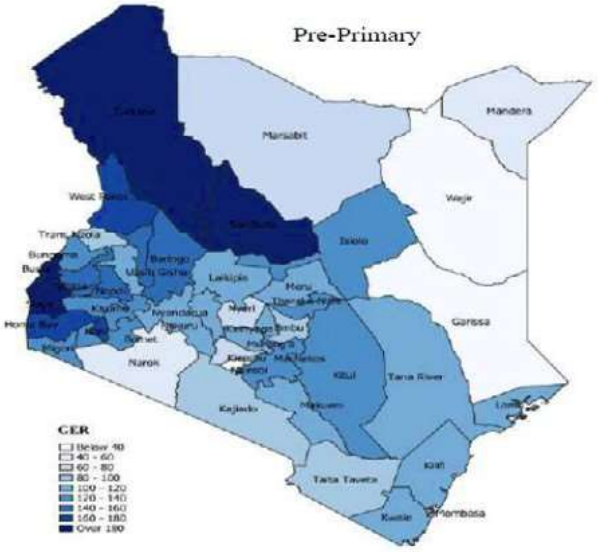

Figure 1: Pre-Primary GER by county, 2019
Source: MoE, Basic Education Statistical Booklet, 2019

The pre-primary female-to-male enrolment ratio remained constant at 0.96, with 48,851 more boys enrolled in pre-primary school in 2019 than girls. Examined by county, 17 counties have reached parity (considered to be ratios between 0.96 and 1.03) while 23 counties have disparities in favour of boys. Bungoma, Marsabit and Mandera are counties where girls are more highly disadvantaged, with female-to-male enrolment ratios of 0.62, 0.72, and 0.76 respectively. Conversely, Kiambu county has the highest ratio in favour of girls (1.25). This implies the enrolment target is on track.

Table 2: ***Access Rates and Quality Levels***

TYPE		2016	2017	2018	2019
No. of Centres	Public		25,381	25,589	28,383
	Private		16,398	16,728	18,147
	Total		41,779	42,317	46,530
Enrolment Rate	GER	76.2	77.1	78.4	109.4
	NER	74.9	76.9	77.2	
Enrolment by Gender	Boys	1,607,353	1,681,530	1,730,237	1,393,719
	Girls	1,560,502	1,565,647	1,660,308	1,344,868
	Total	3,199,841	3,293,813	3,390,545	2,738,587
Gender Parity					0.96

On improving health, nutrition and protection of pre-primary education learners, child nutrition is a key element in Early Childhood Development and Education and its implications are crosscutting and affects child health and productivity in class. This is further supported by the National School Meals Strategy 2018-2022 developed by the National and County Governments in collaboration with key development partners.

In 2019/20 financial year, 29 County Governments invested KShs. 1.117 billion in school feeding programmes, benefitting 1.115 million learners. Of the 29 Counties, 12 invested in School Lunch Programmes, while 8 counties invested in School Milk and Porridge Programmes. Furthermore, 18 County Governments are currently adopting community led initiatives for ECDE school feeding programmes to sustain these programmes and enhance community ownership of child nutrition programmes. The target to improve health, nutrition and protection of pre-primary education learners is therefore on track.

2.2.2 Policy Priority 2: Enhance Quality and Relevance of Pre-primary Education

Goal: Enhance quality and relevance of pre-primary education.
Policy Target (s): Ensure 100% of pre-primary schools deliver Competency Based Curriculum by 2020.
Programme 2.1: Implement the competency-based curriculum for Pre-Primary education.
Programme 2.2: Improve assessment of learning in pre- primary education.
Programme 2.3: Strengthen the capacity of ECDE Workforce.
Programme 2.4: Improve pre-primary education standards and quality assurance.

Implementation of the competency-based curriculum for Pre-Primary education

The competency-based curriculum has been implemented with all schools delivering the new curriculum, which was a major NESSP 2018-2022 policy objective. One of the programmes under this policy priority aims to 'Strengthen the Capacity of ECDE Workforce, The available data, however, only allows assessment of the overall availability of teachers, but not their qualifications.

The pupil-teacher ratios suggest that there is still ground to cover for the public education system in terms of provision of skilled personnel to provide adequate care and education to pre-primary learners. In 2019, the average pre-primary pupil-teacher ratio in public schools was quite high, at 37 learners per teacher, while the recommended PTR for this level is 25:1. This greatly contrasts with the situation in private pre-primary centres, which on average have a PTR of 21:1. Pupil-teacher ratiosalso widely vary by county, reaching as high as 187.7 pre-primary students for one teacher in TurkanaCounty. Mandera and Samburu counties also present very high ratios at 85.3:1 and 80.2:1,

respectively. Although it cannot be compared with previous years' figures due to the changes in age group of pre-primary schooling.

Train Pre-primary School Teachers, County ECD Officers and other Curriculum implementers on Competence Based Curriculum;

The Ministry has continued to ensure that the curriculum implementers are equipped with the necessary pedagogical skills for implementation of competency-based curriculum. During the period under review, over 90,000 curriculum implementers comprising curriculum support officers, head teachers, teachers, teacher trainers and field officers were trained. The target of training school teachers and county ECD officers on CBC is on track. However, the mode of training will need to be reviewed towards on-line programmes following the effects of COVID-19.

Develop Competence Based Curriculum support materials for pre-primary education;

The curriculum designs and curriculum support materials for early years education (Pre-Primary 1 and 2 and Grades 1, to 5) were developed and disseminated. This culminated in the national roll out of CBC in early years education in January 2019.

In addition, KICD developed the Orange Book which lists approved curriculum resources for learning and instruction in ECDE centres. All County Governments have purchased and issued these resources (books and assorted play materials) for pre-primary schools.

The target to develop Competence Based Curriculum support materials for pre-primary education is therefore on track.

The number of ECDE learners has risen due to an increased demand for pre-primary education, raising the teacher-learner ratio from 31:1 in 2016 and 36:1 in 2019.

Competence Based Curriculum Instructional Materials for Inclusivity;

The Sector ensured that CBC curriculum and curriculum support materials are adapted to suit learners with disability to enhance their inclusivity. The learning areas in CBC pre-primary level that have been adapted for learners with visual, physical and hearing impairment include Mathematical activities, Environmental Activities, Psychomotor and creative Activities, Pre-braille Activities and Kenyan sign language.

Finalize a Scheme of Service for Pre-primary Teachers and Caregivers;

The Council of Governors in partnership with the County Public Service Boards, Ministry of Education, Teachers' Service Commission, Kenya Institute of Curriculum Development, Salaries and Remuneration Commission and support from UNICEF, developed ECDE Teachers' Scheme of Service launched in the year 2018. The target of finalizing the scheme of service for pre-primary teachers is therefore ahead of track.

Recruit Additional Pre-primary Teachers and Caregivers

The number of teachers recruited by the County Governments through the County Public Service Boards declined by 30 per cent from 68,823 in 2016 to 52,780 in 2019. This can be attributed to the County Governments advancing towards the implementation of the Scheme of Service which requires teachers to have at least a qualification of certificate in ECDE.

Mainstream a Pre-primary Teacher Training Programme in Teacher Training Colleges;

ECDE teacher training has been mainstreamed in public teacher training colleges. The minimum qualification for pre-primary teacher has been raised to Diploma in ECDE and entry qualification for training has been revised to C plain in KCSE. The first pre-service ECDE cohort to train in CBC was admitted in May 2021 in six Teacher Training Colleges.

Review the National Pre-Primary Education Policy

The Ministry developed and disseminated the National Pre-Primary Education Policy in 2017 and standard guidelines for implementation of the policy developed in 2018 to all county directors and sub-county directors of ECDE in 2018. Dissemination for county directors of ECDE was again done virtually in 2020. Table 3 shows summary of the status of curriculum implementation at Pre-primary education level.

Table 3: ***Status of Curriculum Implementation at Pre-primary Education***

Programme	Planned NESSP 2018-2022 Activity	Status of Implementation
Implement the Competency Based Curriculum for Pre-Primary education	Finalize the development of the Competency Based Curriculum for pre-primary education, and implementation framework	The CBC framework (Basic Education Curriculum framework) was finalized 2017 revised 2019.
	Train pre-primary school teachers, county ECD officers and other curriculum implementers on Competency Based Curriculum	Over 50,000 pre-primary school teachers, county ECD officers and other curriculum implementers for PP1 and PP2 capacity built
	Develop Competency Based Curriculum support materials for pre-primary education	All Competency Based Curriculum support materials for pre-primary education developed and the national roll out of CBC for this level achieved.
	Develop and implement a capacity building programme for pre-primary and quality assurance officers	Capacity building programmes for pre-primary and quality assurance officers were developed and implemented for each learning level.
	Adapt the Competency Based Curriculum instructional materials for inclusivity	100% of Curriculum support materials for Pre-primary 1-2 have been adapted to suit learners with Special Needs and disability (Visually impaired, hearing impaired, physically impaired and prevocational level)
	Counties to recruit adequate and qualified pre-primary instructional support officers	

2.2.3 Policy Priority 3: Enhance Governance and Accountability in Pre-Primary Education

Goal: Improve governance and accountability in management of pre-primary education services.
Policy Target (s): Established multi-sectoral approach in governance, coordination, linkages and collaboration with pre-primary service providers by 2022.
Programme 3.1: Develop multi-sectoral collaborations and linkages in the management of pre-primary education.

NESSP 2018-2022 pre-primary policy targets under governance is to establish a multi-sectoral approach in governance, coordination, linkages and collaboration with pre-primary service providers by 2022. This to enhance governance and accountability in the pre-primary sub-sector.

The National pre-primary education policy standard guidelines (2018) provide for all five domains of nurturing care (health, nutrition, safety and protection, opportunities for learning and responsive caregiving) for learners in pre-primary schools. In addition, the standard guidelines, as well as the Early Childhood Education Act, 2021 provide structures for establishment of National Early Childhood Education Committee (NECEC) and County Early Childhood Committees (CECEC) to oversee implementation of ECE at those levels as well, as a BoM and a PA committee in each pre-primary school. It is also a requirement that every pre-primary school has a head-teacher. To ensure provision of the requirements for holistic development of the learners, the Ministry has established a National Early Childhood Education committee (NECEC) which comprises stakeholders from different sectors that have interest in ECDE according to pre-primary education policy standard guidelines. The committee has been established to oversee implementation of ECE across all the Counties. However, Counties have not yet established County Early Childhood Education Committees (CECEC), but Samburu and Isiolo have adapted existing committees to provide linkages and coordination with relevant stakeholders in improving ECDE at the County level.

The above shows that the goal to enhance governance and accountability in pre-primary education is on track.

Enabling Factors and opportunities

Access and Participation in Inclusive and Quality pre-primary Education

The growth in the number of public pre-primary centres might be partly attributed to accelerated investment by county governments, after the devolution of early childhood education to this level. Increased enrolment rates can be attributed to the full adoption of the Competency Based Curriculum from the 2018 academic year and replacing the former three levels to two levels (PP1 and PP2). Provision of school feeding programme in 29 counties enhance access to pre-primary education.

Enhance Quality and Relevance of Pre-primary Education

Provision of Competence Based curriculum and assessment tool Kenya Schools Readiness Assessment Tool (KSRAT), learning materials, scheme of service for teachers and policies that require that all teachers be qualified and registered with TSC. Also, the morale of teachers is enhanced through employment by governments under the requirements of the Scheme of Service. A number of teachers have been trained in pedagogical skills to facilitate CBC implementation.

Enhance Governance and Accountability in Pre-primary Education

Goodwill from partners enabled the establishment of the National Early Childhood Education Committee. In addition, collaboration between the National and County Governments in the establishment County Early Childhood Education committee.

Challenges

Access and Participation in Inclusive and Quality Pre-primary Education

There lacks a policy establishing the minimum level of funding for pre-primary, inadequate regulation and enforcement of quality standards as well as a comprehensive system for monitoring children development across sectors. The gap in minimum funding for pre-primary education includes lack of capitation grants for pre-primary education which is part of basic education and hence compulsory as per the Constitution of Kenya. Other challenges include unavailability of data on learners with special needs; inadequate resource allocation, inadequate functional assessment, low awareness at community level. Inadequate qualified personnel at the Education Assessment Resource Centres (EARC) to sensitize the parents/community on importance of presenting the children with disabilities for assessment and placement hampers their participation in education. Stigmatization has caused many parents to have shied away from having their children assessed and subsequently placed in

school. Inadequate and inappropriate school infrastructure, inadequate and inappropriate learning/teaching resources, as well as play materials.

Enhance Quality and Relevance of Pre-primary education

Inadequacy of teaching staff leading to high pupil teacher ratio adversely affects the quality of services offered at the pre-primary level. There exists shortage of instructional materials and teacher professional development, and personnel capacity gap. Some teachers have not yet been trained on implementation of the Competence Based Curriculum and are therefore using the old pedagogical skills to deliver the curriculum. High teacher turnover and variations in teacher remunerations across the counties and therefore not all teachers are rewarded according to the requirements of the scheme of service. This affects the morale of the teachers and consequently the quality of learning. Whereas the policy requires that all learners are provided with mid-morning snacks and a well-balanced meal at mid-day, some counties have not implemented the feeding programme. Teaching, learning and play materials are not adequately provided.

Enhance Governance and Accountability in Pre-primary Education

Weak inter-sectoral coordination which should bring together interventions from key sectors such as health, nutrition, education and social protection for a comprehensive delivery of pre-primary education and child development services. CBC places emphasis on parental engagement in their children's learning especially in early years. Parental empowerment and engagement consist of partnerships between parents, schools and communities. It involves raising the awareness of parents on the benefits of engaging in their children's education and providing them with skills to do so. Existing evidence has shown that parental involvement is the number one predictor of early literacy success and future academic achievement. Parental engagement also results in better discipline outcomes in school, thus there is need to build capacity of the education system especially under CBC to connect, engage and sustain parental involvement in the education of their children.

2.3 Primary Education

2.3.1 Policy Priority 1: Access and Participation in Primary Education

Goal: To improve access and participation in primary education. Policy Target (s): To increase the Net Enrolment Rate (NER) from current 91.2% to 93.1% in primary education by the year 2022. Programme 1.1: Universal Primary Education.

At primary school level, GER declined from 104.0 percent in 2018 to 99.6 percent in 2019 indicating a reduction in the number of underage and overage pupils enrolled in primary school. It is not evident whether this decline reflects efficiency improvements in the sub-sector or reduced enrolment regardless of age. A decrease in the number of under and overage children enrolled would represent improved efficiency. The Net Enrolment Ratio (NER) stood at 92.5% in 2018, a rise from 91.2% in the previous year. The progress towards NER target set in NESSP of 93.1% by the year 2022 is on track.

A decline in enrolment is observed in absolute terms from 10,290,155 in 2017; 10,389,826 in 2018 and 10,072,040 in 2019 in primary education. Overall, the drop in primary school pupils in 2019 with respect to the baseline in 2017 represents 2%. There was a 0.6% increase in 2019 with respect to the baseline, with a reduction of fifty schools between 2018 and 2019. The reduction in public primary schools could be due to stricter inspections conducted by the Ministry, which led to closures of schools not meeting requirements (Republic of Kenya, 2020). While a more rigorous control of the

quality of establishments is a step forward; the overall trend suggests that opportunities to access primary education are still limited by an insufficient supply of schools for every category of parents and learners across the country.

Table 4: ***Number of Primary Schools, 2017-2019***

	2017	2018	2019	2020
Public primary schools	23,139	23,336	23,286	23,391
Private primary schools	8,310	8,447	9,329	8,163
Total	31,449	31,783	32,615	31,554

Source*: MoE, 2019 Basic Education Statistical Booklet*

There has been some progress in the Primary Completion Rate (PCR) over the plan period, which grew from 84.2% in 2018 to 85.4% in 2019. Yet, this rate is still far from the 100% target for 2022. Primary to Secondary Transition Rate (PSTR) rose by 2.2 percentage points to 85.5 percent in 2019 from 83.3 percent in 2018. A further analysis centred on a cohort reveals that while most children reach Standard 6 in the required number of years, the progression suffers in the two subsequent years. Of those children who started standard one in 2012, 18.1% did not reach Standard 8 in the requisite time, due to repetition or early school leaving (Republic of Kenya MoE, 2019). It is also notable that for 2020, a good number of private schools were negatively affected by the pandemic leading to closures.

Table 5: ***Primary Completion Rate, 2017-2019***

	2017 Baseline	2018	2019	2022 Target
Primary completion rate	84%	84.2%	85.4%	100%

Source: *Economic Survey, 2020.*

The strategy to improve public primary schools' infrastructure saw 973 schools funded against a target of 1,075 schools to put up various needs ranging from classrooms, washrooms and general renovations of school learning infrastructure facilities at KShs. 670M for the period under review. This is a drop in the ocean given the total number of public primary schools in the country which is 23,286. Table 6 shows the trends. In 2019/20 the second tranche of Kshs 150M was not actualized due to austerity measures that resulted in budget cuts by the exchequer. Similarly, in 2020/21 the second tranche was not actualized.

Table 6: ***Primary School's Infrastructure Improvement Funding Trends***

Financial Year	2017/18	2018/19	2019/2020	2020/21
Amount Kshs	200,000,000.00	200,000,000.00	150,000,000.00	120,000,000.00
No: Of Schools	277	304	211	181

Source: *MoE-Administrative Data.*

Enabling Factors and Opportunities during the Implementation

Enabling factors that influenced the effectiveness of the programme include funding from the National treasury for training teachers; good will from stakeholders; enhanced teacher training in implementing the new CBC curriculum; and field officers' commitment in supervision and support of rolled out programme and projects. The donor communities and education partners played a key role in ensuring key deliverable are tracked as outlined in NESSP document during various forums.

Their input in various strategic interventions like WASH access, health and life skills interventions were also key in ensuring sustained retention and well-being of leaners in schools.

Challenges Faced During the Implementation of the Strategies

Data on schools, enrolment, targeted schools for unique interventions for primary schools remain a challenge despite concerted effort from NEMIS intervention. There was huge capital outlay for infrastructural improvement for old dilapidated classrooms, washrooms, administrative facilities built during colonial times. Further, high cost of instructional material provision in schools including provision and replacement of Digital Learning Devices (DLP) for all leaners including SNE assistive devices. There are also inadequate skills in project management for educational officers at the national and regional levels to enable them undertake proper follow up of projects to achieve value for money.

2.3.2 Policy Priority 2: Equity and Inclusivity in Primary Education

Goal: To enhance equity, inclusivity and safety in primary education across the country Policy.
Target(s):
i. Increase the share of SNE enrolment in primary education from 1% to 5% by 2022.
ii. Increase primary enrolment rates for children from rural, poor, as well as conflict prone and vulnerable contexts; and
iii. Reduce gender disparities in access and completion of primary education.
Programme 2.1: Reduce disparities in access and retention to primary education.

The description of progress toward equity and inclusivity in primary education focuses on the indicators of participation of two key groups: girls and children with special needs.

The primary female-to-male enrolment ratio increase from 0.965 in 2017 to 0.972 in 2019, but reaching the 2022 target of gender parity in primary school enrolment will require a more focused effort.

Figure 2: **Female/male enrolment ratio by primary grade/class, 2019**
Source: *MoE, Basic Education Statistical Booklet, 2019.*

From Figure 2; there are greater disparities in favour of boys in the earlier grades, particularly in Grade 1 and Grade 2, which have female/male enrolment ratios of 0.93, and Grade 3 and Class 4, with ratios of 0.95. This may reflect two possible phenomena: fewer girls enrolling in primary school and/or a higher number of girls leaving school very early on in the cycle. A simple observation of the enrolment volumes in pre-primary education and in Grade 1 of primary reveals that much of the loss

is already evident in the transition from pre-primary levels. This loss is higher among girls as compared to boys, although these figures need to be taken as rough approximations, as they are not weighted by the respective age and gender population groups. Evidence from ASAL areas showed that inclusion of gender responsive pedagogy in in-service training of teachers was positively correlated with retention of girls and their performance especially in refugee context, as well as in Turkana and Garissa counties.

In 2019, twenty-seven counties have achieved female/male enrolment ratios between 0.96-1.03, while nineteen counties have ratios below 0.96. The greatest disparities can be observed in Mandera (0.58), Wajir (0.75) and Garissa (0.81) counties. More focused interventions would be required to provide opportunities for girls to have access to and complete primary education, particularly in ASAL areas.

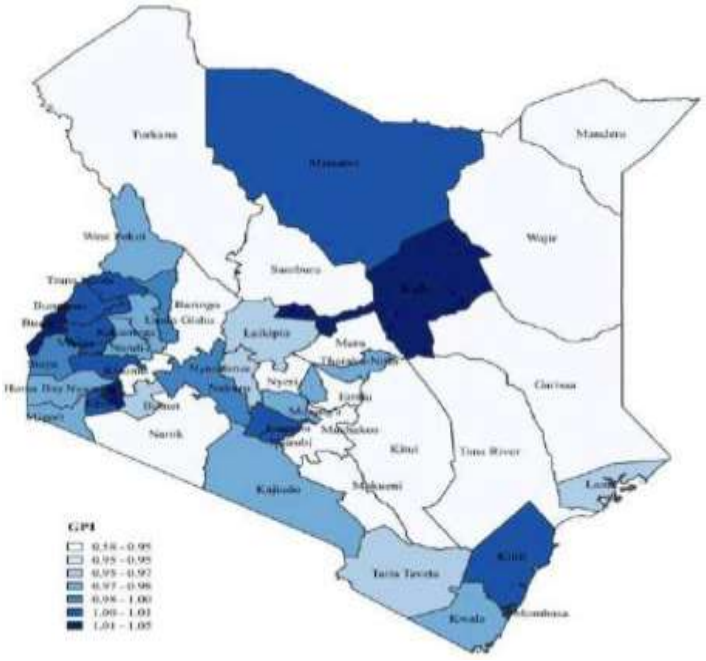

Figure 3: **Primary Gender Enrolment Ratio by County, 2019**
Source: *MoE Basic Education Statistical Booklet, 2019.*

The share of Special Needs Education (SNE) enrolment on total public primary enrolment has slightly increased compared to the baseline. On the other hand, the additional numbers of children enrolled in SNE do represent significant improvement. In 2019, there were over 27,800 more public primary school children in SNE. This is an additional one-quarter than in 2017, when NESSP was developed. While promising progress has been realized, at this pace the 5% planned 2022 target is still far out of reach.

Positively, the number of public SNE institutions has also grown by 6% over the 2017-2019 period, accounting for 13% of all public primary schools. This expansion and the assessment services offered at the 47 county Educational Assessment and Resource Centres (EARCs), and at the National Referral Psycho-Assessment Centre at the Kenya Institute of Special Education (KISE), indicates an increasing attention to inclusivity in education. Nonetheless, strategies could be further reinforced, as it has been noted that these centres operate with limited capacity of qualified personnel, essential equipment and requisite assessment skills (MoE, 2019, p.22).

Table 7: ***Share of Public SNE Enrolments and total Public Primary SNE Enrolments, 2017-2019***

	2017 Baseline	2018	2019	2022 Target

Share of SNE enrolments in public primary education	1.2%	1.36%	1.6%	5%
Total public primary SNE Enrolments	108,221	121,144	136,081	-

Source: *MoE, Basic Education Statistical Booklet and Simulation Model, 2019.*

One of the planned activities that aimed to reduce disparities and enhance retention in primary education within NESSP 2018-2022, was establishing more low-cost boarding schools in all regions, including in ASAL areas and marginalized communities. Although the information on this strategy centred on improvement of boarding infrastructure facilities that was on-going, the effects can be partially assessed through the evolution of students being housed in these centres. However, both the absolute number and the percentage of primary school pupils enrolled in low-cost boarding schools have fallen during NESSP implementation. This is an Indication of being off track. The share first increased, despite higher total enrolment in primary, and then dropped to 1% in 2019, making it less likely to reach the expected target of 5% in 2022. The decline was even sharper considering the total number of students in low-cost boarding schools, which in 2020 is an estimated 26% lower than the total housed in 2017.

Enabling Factors and Opportunities During the Implementation

The government provision of peace and security in the country cannot be taken for granted in the period under review. The various multi-stakeholder engagement like in examination administration, ensuring all leaners are mopped up in school by the local leaders and government officials must be encouraged. This ensured increases in completion rates and other key indicators. Some of the opportunity was work from home concept was put into practice and this awoken the idea that ICT and collaborative learning can be used to deliver tasks without being physically present in the office. This was able to save on office space, break tea budget, and crowding in work place.

Challenges Faced During the Implementation of the Strategies

Lack of constant capacity building on monitoring and evaluation of programme being undertaken to achieve equity and inclusivity, a proper budget line needs to established to support the monitoring from the national level, county level and sub county level.

2.3.3 Policy Priority 3: Quality and Relevance in Primary Education

Goal: To enhance quality and relevance in primary education.
Policy Target (s): Improve learning outcomes in primary education.
Programme 3.1: Curriculum Reforms in Primary Education.
Programme 3.2: Assessment Reforms in Primary Education.
Programme 3.3: Integrate ICT in teaching, learning and assessment in primary education.
Programme 3.4: Enhance early talent identification under competency based primary education.

Four major programmes were planned to improve the quality and relevance of primary education: reforming the curriculum; reforming assessments; integrating ICT into teaching, learning and assessment; and enhancing talent identification. This section provides both a review of some key activities under these programmes, and an update on the progress of major quality indicators, such as pupil-teacher ratio, and scores in national assessments and examinations.

Following several piloting phases in 2017 and 2018, the new Competency Based Curriculum (CBC), which emphasizes learners' acquisition of core competencies and skills relevant to the socio-economic development vision for the country, has been rolled out and is currently implemented in all primary schools up to Grade 4. The curriculum is compulsory in all public and private schools, with

the exception of a few international schools offering other curriculums or mixed curriculums. The 2022 target of 100% of schools implementing the Competency Based Curriculum is therefore on track. The sector also ensured that curriculum and curriculum support materials are adapted to suit learners with various forms for impairments. The learning areas in CBC pre-primary level adapted for learners with visual, physical and hearing impairment include; Mathematics, Environmental Activities, Movement and Creative Activities, Braille literacy and Kenyan Sign language. Table 8 shows status of curriculum reform implementation at primary education level.

Table 8: ***Curriculum Reform Implementation at Primary Education***

Programme	**Planned NESSP 2018-2022 Activity**	**Status of Implementation**
Curriculum Reforms in Primary Education	Develop CBC and support materials for primary	Curriculum and curriculum support materials for Grades 1-6 have been developed and the national rollout of CBC has been achieved up to Grade 5
	Build the capacity of primary school teachers in CBC	200,667 curriculum implementers for Primary Grades 1-5 capacity built
	Adapt CBC and curriculum support materials for SNE	Curriculum support materials for SNE have been adapted up to Grade 4

Source: *KICD & TSC Reports, 2020.*

Programme 3.2 focused on reforming primary level assessments to be coherent with the Competency Based Curriculum, ensuring a balance of formative and summative assessments. The programme included activities such as the development of a Competency Based Assessment (CBA) and building the capacity of teachers and education officers on CBA. Many of the planned activities for this programme have already been accomplished during the Plan's period, as seen in Table 8. In 2018, the Competency Based Assessment (CBA) framework for primary education level was developed and published and the CBA was piloted at Grade 3 level.

Building the Capacity of Teachers and Education Officers on CBA

Building the capacity of teacher and education officers on CBA was conducted through a multi-sectoral team led by TSC. To this end, the sector trained a total of 221,000 teachers in 2017/18 FY, 215000 teachers in 2018/2019 and 170,000 in 2019/20 on various aspects of CBC curriculum.

Table 9: ***Teachers Trained in Various Aspects of Competency Based Curriculum from 2018/19-2020/2021 Financial Years***

Year	2027/2018	2018/2019	2019/2020	2020/2021
No of Teachers	221,000	215,500	170,450	217,415

Table 10: ***Activities on Assessment Reforms in Primary Education***

Programme	Planned NESSP 2018-2022 Activity	Implementation status
3.2: Assessment Reforms in Curriculum	Enhance the management of national examinations in primary education	Management of National Examinations enhanced through use of multi-agency approach introduced in 2016 and maintained throughout the plan period. KCPE examinations irregularity maintained at below 1% from 2018 to 2020.
	Development of a Competency Based Assessment (CBA) Framework for basic education	Competency Based Assessment framework up to Grade 3 was developed in 2018.
	Pilot CBA at Grade 3 and Grade 6	In 2018, CBA was piloted at Grade 3. Targeted 100 primary schools that were part of the 235 schools that CBC was piloted in. Grade 6 pilot was conducted in September 2021. 200 schools were sampled for the pilot.
	Build the capacity of teachers and education officers on CBA in primary education	Capacity building of teachers and education officers on CBA was conducted through a multi-sectoral team led by Teachers Service Commission. By the end of 2020 a total of 215,253 primary school teachers had been trained on CBA for primary education.
	Build the capacity of technical officers on conceptualization, design and implementation of CBA for primary education	This was done through workshops for teachers and field officers.
	Establish a web-based portal to facilitate access to formative assessment at school level	In the year 2019, an online portal to facilitate formative assessment at basic education level was developed. The portal is able to conduct identification of learners by teachers registering them on the system, uploading of assessment tools for access by schools. The system also allows uploading of scores for access by KNEC for data analysis and report writing. The system has undergone periodic updates to enable use in subsequent levels in primary schools.

	Conduct annual Kenya Early Years Assessment (KEYA) at Grade 3 and Primary School Education Assessment (PSEA) at Grade 6.	In 2019 the first Grade 3 assessment was conducted. A total of 1,282,150 learners were assessed in 37,374 primary schools. Out of this 604,522 (47.15%) were female, while 677,628 (52.85%) were male. A total of 5,224 learners with special needs were identified out of which 2,125 were on regular (age-based) pathway and 3,099 were on SNE (stage-based) pathway.

		In May and June 2021, the second Grade 3 assessment was conducted. A total of 1,239,040 learners were assessed in 35,743 primary schools. Out of this 630,955 (47.69) 691,995 (52.31%) were female, while 691,995 (52.31%) were male. A total of 3,796 learners with special needs were identified out of which 1,855 were on regular (age-based) pathway and 1,941 were on SNE (stage-based) pathway.
	Establish and maintain a secure item bank system for formative and summative assessment	This was conceptualized by KNEC in 2019 and it is in procurement stage. To be installed by June 2022.

With regard to some other major quality measurements, while the pupil-textbook ratio (for lower primary) has remained relatively constant at 0.97, the teacher-pupil ratio in public schools registered some variation since 2017. While the last value observed of 38.6 pupils per teacher in public schools is an improvement, it should be taken with caution given the variability observed across counties in the period under review.

Table 11: ***Pupil-Textbook ratio & Pupil-Teacher ratio, 2017-2020***

ITEM	2017 Baseline	2018	2019	2020
Pupil-Textbook ratio (Lower primary)	-	0.97	0.96	0.97
Pupil-Teacher-ratio (public)	40.7	41.2	38.6	40

Source: *MoE Basic Education Statistical Booklet, 2019.*

At county level, in 2019 there were 23 counties with public primary PTRs above the 38.6 national average, including six counties with public primary PTRs above 50. The highest pupil-teacher ratiosare registered in Turkana (80.3) and Mandera (73) counties. Teachers Service Commission has takenmeasures to reduce these disparities by posting newly recruited teachers based on the relative shortage. While the Commission has put in place mechanisms to reduce theses disparities there is need to provide funding for recruitment of more teachers to cater for the current shortage and requirements occasioned by increase in enrolment.

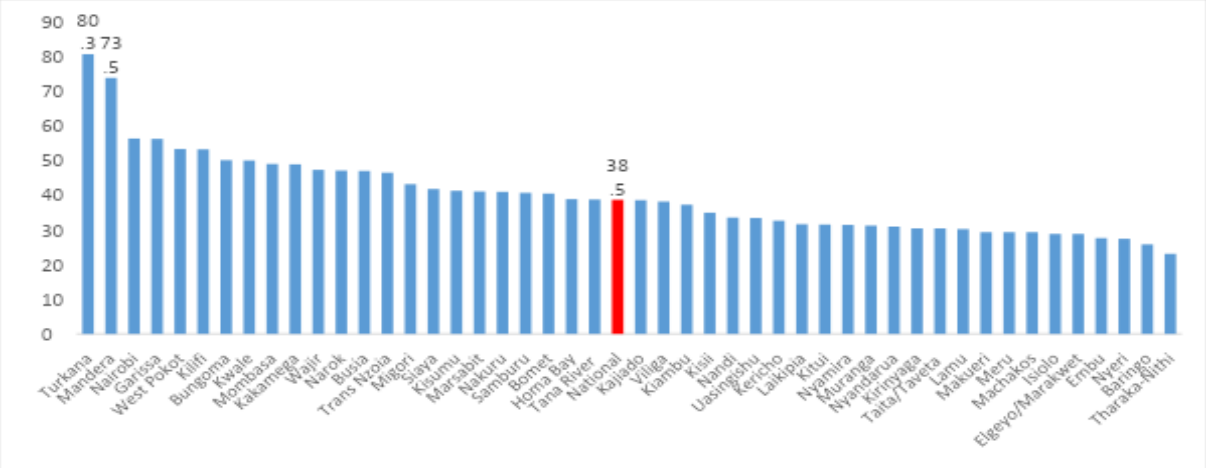

Figure 4: **Pupil-teacher Ratios by County**

Source: *MoE, Basic Education Statistical Booklet, 2019.*

National assessments and examinations can provide an indication of the status of the quality of education, and whether students are adequately learning the required skills for their grade level. Students in Kenya take the Early Grade Mathematics Assessment (EGMA) in Grade 2, the National Assessment System for Monitoring Learner Achievement (NASMLA) in Grade 3 and Class 7, and Monitoring Learner Achievement (MLA) in Form 2. National examinations are administered to students at the end of each learning cycle students take the Kenya Certificate of Primary Education (KCPE) at the end of primary and the Kenya Certificate of Secondary Education (KCSE) at the end of secondary.

Grade 2 learners' achievement in the Early Grades Mathematics Assessment (EGMA) has had marked improvement from the baseline year. The proportion of learners attaining minimum proficiency (50% benchmark) in mathematics increased by 5 percentage points, from 71.1 in 2017, to 76.1 in 2019. The improvement in EGMA scores in private schooling is particularly pronounced, a 15.8% increase between 2017 and 2019.

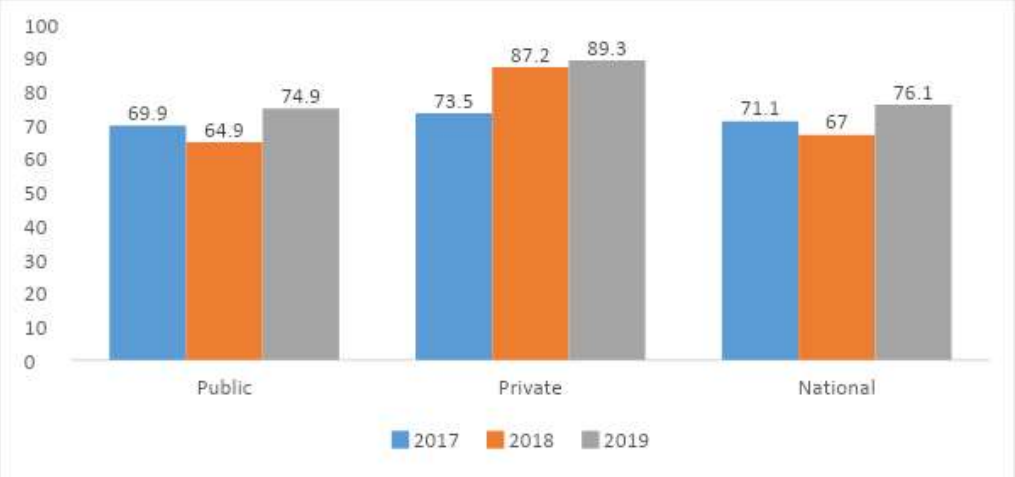

Figure 5: **Proportion of Learners Achieving EGMA 50% Benchmark, 2017-2019**
Source: *MoE, Basic Education Statistical Booklet, 2019.*

The national mean score in EGMA test of 2019 was 506.1. The counties with the highest average scores were Wajir (589.8), Garissa (589.8) and Tharaka Nithi (558.6). The counties with the lowest scores observed were Kakamega (451.3), Bomet (443.3) and Bungoma (439.3).

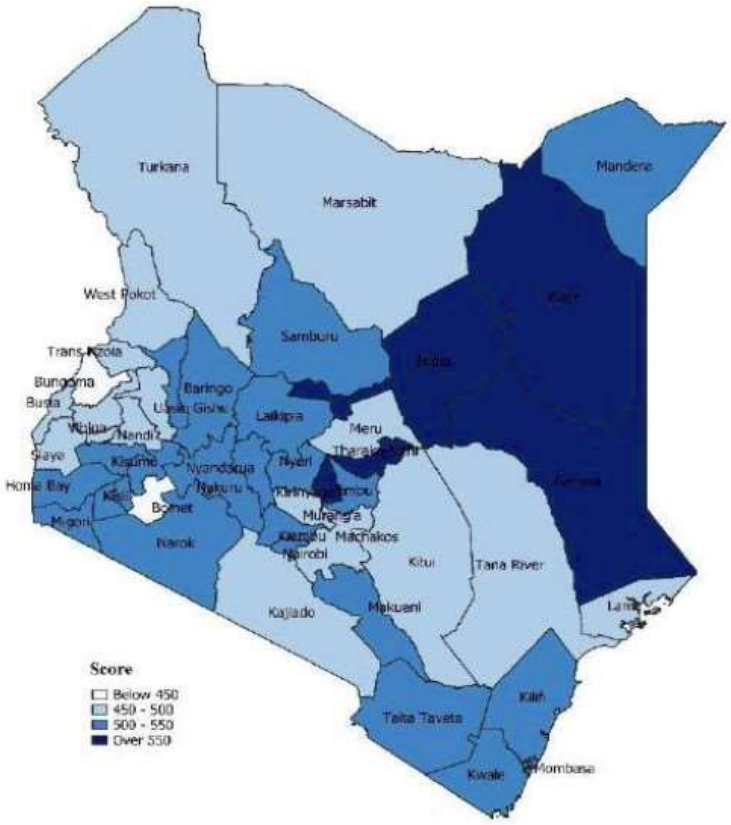

Figure 6: **Achievement in EGMA by County, 2019**
Source: *MoE, Basic Education Statistical Booklet, 2019.*

The National Assessment System for Monitoring Learner Achievement (NASMLA) was conducted for Grade 3 students. Each subject has four different competency levels. As seen in Table (11) for the assessment on numeracy, in 2018, only 5.4% of students reached level 4, a slight improvement from 2016, when 4.5% students had reached that level. The assessment on literacy shows better competencies, particularly in Kiswahili. Literacy competencies in the highest level seem to have improved between 2016 and 2018, with 41.2% of Grade 3 students assessed performing at level 4 in English, and 48.7% of those assessed performing at level 4 in Kiswahili. EGRA results showed that the proportion of non-readers from 38% to 12% between 2014 and 2016. In Kiswahili, the proportion of non-readers in Grade 2 reduced from 43% to 19% and the proportion of fluent readers increased from 4% to 12%.

Table 12: ***Grade 3 NASMLA Achievement in Numeracy by Competency Levels, 2018 -2020***

	Competency description	2018	2019	2020
Level 1	Applies single step addition or subtraction operations (e.g., add numbers without carrying over, subtract without borrowing). Counts in whole numbers.	86.3%	-	-
Level 2	Applies a two-step addition or subtraction operation involving carrying over and borrowing. Applies simple multiplication operations involving multiples of 10. Recognizes simple fractions.	64.8%	-	-
Level 3	Translates information presented in a sentence into one arithmetic operation. Interprets place value of whole numbers	42.1%	-	-

	up to thousands. Interprets simple common everyday units of measurement such as days, weeks, meters and shillings.			
Level 4	Translates information presented in sentences into simple arithmetic operations. Uses multiple arithmetic operations (in the correct order) on whole numbers.	5.4%	-	-

Source: *MoE, Basic Education Statistical Booklet, 2019*

Table 13: ***Grade 3 NASMLA achievement in literacy by competency levels, 2018 - 2019***

	Competency description	English		Kiswahili	
		2018	2019	2018	2019
Level 1	Pre-reading: Matches words and pictures involving concrete concepts and everyday objects. Arranges words in alphabetical order.	13.1%	-	12.5%	-
Level 2	Emergent reading: Spells correctly simple everyday words and recognizes missing letters in such words. Uses familiar words to complete simple everyday sentences	63.3%	-	77.7%	-
Level 3	Basic reading: Uses correct punctuation in simple sentences. Infers meaning from short passages and interprets meaning by matching words and phrases. Identifies the main theme of a picture.	53.1%	-	70.4%	-
Level 4	Reading for meaning: Links and interprets information located in various parts of a short passage. Understands and interprets the meaning of a picture and writes short sentences to describe the theme.	41.2%	-	48.7%	-

Source: *MoE, 2019 Basic Education Statistical Booklet.*

The national average Kenya Certificate of Primary Education (KCPE) score has remained relatively constant over the last three years, slightly below fifty percent. While the average score increased between 2017 and 2018, from 48.3 to 49.1, it decreased again in 2019 to 48.4. On average, girls performed slightly better than boys, with a mean subject score of 48.7 in 2019 compared to 48.1 for boys. The subjects with the lowest scores in 2019 were Kenya Sign Language Composition and Objective, English Composition and Kiswahili Objective.

Table 14: ***KCPE Performance by Gender, 2017-2019***

	2017			2018			2019		
	M	F	Average	M	F	Average	M	F	Average
English objective	47.4	47.8	47.6	54.6	54.8	54.7	53.8	53.5	53.6
English Composition	37.5	41.7	39.6	37.2	41.6	39.4	37.6	42.2	39.9
Kiswahili Objective	48.3	48.5	48.4	51.5	51.7	51.6	44.4	44.9	44.7
Kiswahili Composition	45.5	50.3	47.9	44.8	48.9	46.9	49.2	54.3	51.7
Kenya Sign Language Objective	36.9	37.1	37	37.1	37.7	37.4	39	39.9	39.4
Kenya Sign Language Composition	27.9	30.3	29.1	30.3	33	31.6	30.1	33.3	31.6
Mathematics	52.7	49.6	51.1	44.1	42.1	43.1	50.8	47.7	49.3
Science	57.7	53.5	55.6	61.2	56.7	59	58.3	55.7	57
Social Studies	59.6	54.8	57.2	55.6	52.2	53.9	55.9	53	54.4
Religious Education	69.6	70	69.8	72.6	73.6	73.1	62.1	62.8	62.5

Mean Subject Score	48.3	48.4	48.3	48.9	49.2	49.1	48.1	48.7	48.4

Source: *MoE, Basic Education Statistical, 2019.*

Under Programme 3.3, there were many planned activities around integrating ICT into teaching, learning and assessment in primary education, the majority of which have been achieved during the review period. The on-going implementation of ICT infrastructure, targeting all public primary schools in Kenya has so far distributed 43,434 Teacher Digital Devices (TDD); 1,182,345 Learner Digital Devices (LDD); 21,717 Digital Content Server and Wireless Routers (DCSWR) and 21,717 projectors for ICT integration in teaching and learning in primary education; a 94.4% coverage of schools in 2019 from 2018, 18,701(86.1%) schools in terms of ICT infrastructure provision. The remaining schools are categorized as newly registered and the installation is in progress (ICTA-DLP Status Report Updates-2017 & 2019).

The Sector further planned and provided for ICT interns to be based at the county and sub-county educational offices to support ICT integration in surroundings schools, with assistance from ICT teacher champions from the sub-counties and zonal levels who have been in place since 2017 (ICT Leads Workshop-Q1 Report-TSC). KICD has developed web-based versions of curriculum for pre-primary - Grades 5, and DLP devices with software loaded with KICD content are being utilized in primary schools. Whereas efforts to establish smart classrooms have faced difficulties due to inadequate finance from exchequer.

The initial phase of needs analysis of schools for smart classrooms establishment was undertaken in 2019 although the actual disbursement of funds for construction was not forthcoming. These were to act as computer laboratories in public primary schools to facilitate integration of ICT in the teaching and learning.

Table 15: ***Activities from Primary Programme***

Programme	Planned NESSP 2018-2022 Activity	Implementation status
3.3 Integrate ICT in teaching, learning and assessment in primary	Undertake digital literacy evaluation survey in all public primary schools	Successfully undertaken by ICTA -MoE on needs analysis schools that will start smart classrooms
	Construct computer laboratory in public primary schools	This is yet to be done due to lack of exchequer-8000 public primary schools had been identified for establishment of smart classrooms and schedules prepared.
	Develop digital content for all subjects of CBC for primary schools	KICD has developed Early Years Education (EYE) curriculum designs, core course books from pre-primary 1, pre-primary 2, grade 1-5 both in hard copy and web based uploaded Kenya Education Cloud (KEC). Grade 6-9 books are in draft stages and awaiting approvals and upload to the web and physical distribution to schools
	Equip all public primary schools with hardware and software infrastructure for ICT education	94.4% of schools have ICT infrastructure provision: 43,434 Teacher Digital Devices distributed, 1,182,345 Learner Digital Devices, 21,717 Digital Content Server and Wireless Routers, 21,717 projectors. Installation in

		progress in remaining schools. DLP devices have been loaded with KICD content and are being utilized in primary schools.
	Build capacity of ICT champion teachers in integration of ICT in teaching, learning, assessment and management	This was done through training of one champion for each sub-county involving both primary and secondary. County and pool of key trainers of trainees at national level.
	Build capacity of head teachers for skills in ICT integration in teaching, learning and management	This was done through teacher learning real and virtual forums with ICT Champions at zonal, sub county and county levels
	Establish ICT integration in education support system at the national, county, sub-county and institutional level	The systems were established by MoE- ICTA collaboration under economic stimulus package- for ICT interns' recruitment and deployment, process is at deployment stage.

Under quality and relevance, the strategy on Enhance early talent identification under competency based primary education; there was commitment to undertake the following activities to achieve the goal. A good number of the planned activities had not been initiated.

Table 16: ***Activities from Primary Programme on Quality and Relevance***

Programme	Planned NESSP 2018-2022 Activity	Implementation status
Enhance early talent identification under competency based primary education; there was commitment to undertake the following activities to achieve the goal	23,000 General laboratory and workshops constructed	This is off track. No funding has been factored towards this activity.
	23,000 Science kits and manuals distributed to schools	This is off track. No funding has been factored towards this activity.
	46,000 Teachers trained on Mathematics, Science, English and Kiswahili subjects on innovative approaches;	Tusome has undertaken this extensively under EGM, SBTS, and SBTSS - on track
	8.6m learners talents placed at early stages in primary level	CBC rolled out up to Grade 4 with different learning areas to tap the talents for about 4m leaners on track
	8.6M learners with improved literacy and numeracy levels in the country	National survey for all grades not yet undertaken off track

Enabling Factors and Opportunities during the Implementation

Support from government funding and donor partnership played a key role in achievement of the set targets in most of the activities. The reformed policies under quality assurance and standards helped set the framework for coordination and monitoring most of the activities undertaken to actualize the targets. The outbreak of Covid-19 further provided opportunities for innovations and thinking out of the box as the education sector pondered on ways of ensuring leaners are kept busy and occupied constructively during the school closures. The use of ICT in teaching and learning, internet virtual meetings and collaborations, KICD cloud (KEC) materials came in handy.

Challenges Faced During the Implementation of the Strategies

Noted retrogressive cultural practices and lack of community awareness on legal requirements for children's right to education in some regions lead to increased Out of School Children (OOSC). Caused by among other factors insecurity issues and cultural beliefs. Lack of data on learners' age specific from schools was not available, which is key in calculating key educational statistics indicators for local and global consumption and for informed decision making. The stereotyping on gender issues in some community and regions impact negatively on gender parity index (GPI) leading disparity in some regions.

2.3.4 Policy Priority 4: Governance and Accountability

Goal: Improve school level governance and accountability in primary schools. Policy Target(s): i. Enhance capacity of school management in leadership. Programme 4.1: Improve School Level Governance and Accountability.

There were several planned initiatives aimed at improving primary school level governance and accountability, including building the capacity of head teachers and BoMs in public finance management. All public primary schools have received training in financial management topics under PRIEDE Project component. In the baseline year, 17% of schools in total had received this training, in 2018, 17% were trained, as were 31% in 2019, and 100% in 2020, already achieving the 2022 target.

While the initially planned activity was delayed due to logistical challenges surrounding the particular year, it was undertaken in all schools at the zonal level using a cascade model of training, with national trainers training county trainers and later moving to the zonal levels to train head teachers and chairmen of school Boards of Management (BoM). This was done alongside the development and dissemination of policy guidelines and a Manual for Utilization of Learner Capitation Grant and other School Funds, organized by the Kenya Primary Education Development (PRIEDE) Project, under a World Bank project. All the key managers of the 22,998 public primary schools were trained a total of 66,994 school managers and head teachers.

Table 17: ***Activities on Governance in Primary Education***

Programme	Planned NESSP 2018-2022 Activity	Implementation status
4.1 Improve School Level Governance and Accountability	10,000 BOM sensitized on public finance management	Ahead of track. With over 23,000 management trained
	23,000 Active PA's involvement workshops on parental involvement in Primary school learners' education.	A number of county dialogues forum done on sensitization on education policies
	23,000 management and procurement revised handbooks distributed to schools	Not done. Off track.
	23,000 public primary schools with an operational manual for minimal essential package for utilization of the student capitation grants	Revised policy on leaners capitation and other grants produced and issued to schools
	69,000 primary schools Management stakeholders trained public finance management	Ahead of track. With over 3 board members from every school trained at zonal levels on management trained
	A Public Expenditure Tracking Survey (PETS) and Public Expenditure Reviews (PER) undertaken.	Yet to be undertaken
	A scheme of service providing for the Non-Teaching Staff in public schools developed and implemented	Yet to be undertaken
	A study to access the effectiveness of learner capitation grants; A financing model for capitation allocation to schools.	Consultants engaged and work on-going

Enabling Factors and Opportunities during the Implementation

The partnership with donor and other stakeholders played a key role more so capacity building and training leadership and management skills in the primary education level. The field offices support in rolling out the programme were commendable.

Challenges Faced During the Implementation of the Strategies

In adequate funding of the field offices to cover all training expenses and the vastness of some of the regions was key factor in attendance of participants for the training and other interventions. Transportation mechanism during monitoring of the outlined activities was challenges in some areas where facilitation was not adequate.

2.3.5 Policy priority 5: Social Competence and National Values Systems in Education and

Training

Goal: To inculcate value-based education system in basic education. Policy Target(s): To enhance national cohesion and national values through literacy by 2022. Programme 5.1: Enhance National Volunteer Assistance Programme.

The main programme under this policy priority is to enhance the National Volunteer Assistance Programme (Greatness United), which trains volunteer graduates on basic literacy skills and then posts them to primary schools outside their home counties, to provide support to struggling learners in Grades 2 and 3. It is intended to expand the initiative from 20 counties to all 47 counties by 2022. However, this expansion has not made much progress—in 2019/2020, there were 22 counties covered by the programme, meaning it has only expanded to two additional counties over the last two years. This was attributed to lack of funding by the National treasury. The programme has since been moved to the new State Department of Post-Training and Skill Development (PTSD) since it deals with graduates and post school internships.

Enabling factors and opportunities during the implementation

There was support on this strategy under Social Competence, National Values Systems in Education and Training. Nonetheless, the establishment of the new State Department of Post-Training and Skills Development (PTSD) that has since picked up the National volunteer program. The program will be best housed from this state department.

Challenges Faced During the Implementation of the Strategies

Frequent budget cuts due to austerity measures and change of priority has always impacted on the National Volunteer Program (NVP) meant to achieve some social competence and promote spirit of voluntarism among the youths and leaners.

Priorities for the Implementation of NESSP During the Period 2020/2021 to 2026/2027 under Primary Education

They key priorities for the remaining NESSP period are organized in terms of short term, mid-term and long-term area priorities as tabulated in Table 20.

2.4 Secondary Education

2.4.1 Policy Priority 1: Increase Access and Participation to Secondary Education

Goal: Improve participation in secondary education. Policy Target (s): Increase Secondary Gross Enrolment Rate (GER) from 70.3% to 83% by 2022. Ensure 100% transition from primary to secondary education. Programme 1.1: Universal secondary education.

The Gross Enrolment Rate (GER) for secondary has been steadily increasing since 2017, from 68.5% to 71.2% in 2019. The Net Enrolment Rate (NER) has also followed an upward trend since 2017, although there are no figures available for 2019. There was an increase in enrolment from 2,830,800 in 2017 to 2,943,700 in 2018, and eventually to 3,260,000 in 2019. Despite this increase, both gross and net enrolment rates have not met the planned targets. In 2018, for example, NER was expected to reach 58%, but the actual value that year was about 5 percentage points lower (see Table 18). The target GER in 2019 was 74%, but the actual value registered was 3 percentage points lower (see Table

17). Beyond these targets, which at least in the case of NER seems to have been set up too high, additional measures would be required to accelerate progress in secondary education participation, as a very large proportion of children are missing out on educational opportunities at this level.

Table 18: ***Secondary GER and NER, 2017-2019***

	2017	2018	2019	2022 Target
GER	68.5%	70.3%	71.2%	83%
NER	51.1%	53.3%	-	86%

Source: *MoE Basic Education Statistical Booklet, 2019*

Beyond the national average, there are large disparities between counties. In 2019, there were thirteen counties with secondary GERs below 50%. The lowest secondary enrolments are in ASAL counties: in Isiolo (23.7%), Garissa (23.5%), Mandera (23.1%), Turkana (21.2%), Wajir (19.5%) and Marsabit (17.9%).

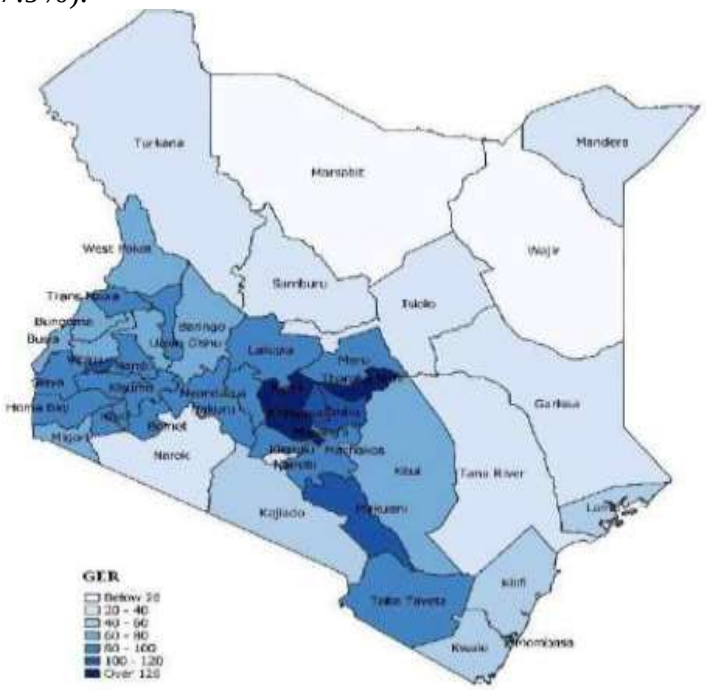

Figure 7: **Secondary GER by County, 2019**
Source: *Basic Education Statistical Booklet, 2019.*

There has also been improvement in the transition rate from primary to secondary school. This has made steady progress from 2017/18 of 83% to 85.5% in 2019, on track to achieve the 2022 target of 88% transition rate. According to the Statistical Booklet, 2019, an increase in the transition rate is to be expected, following the implementation of the 100 percent transition policy of the government.

Table 19: ***Transition Rate from Primary to Secondary, 2017-2019***

	2017	2018	2019	2022 Target
Transition rate from primary to secondary	83.1%	83.3%	85.5%	88%

Source: *MoE, Basic Education Statistical Booklet, 2019*

In order to increase secondary education access, it was planned to establish additional secondary classrooms and facilities. The associated needs projected included building an additional 15,191 classrooms, 7,601 laboratories and 7,601 WASH facilities. However, the progress in the expansion of facilities has been very slow. Between 2018 and 2020, there have been 4,536 classrooms

constructed, as well as 745 laboratories and 460 WASH facilities established. This represents 29.9% of the required classrooms by the end of NESSP, 9.8% of the planned laboratories and 6% of the planned WASH facilities. The progress towards achieving requisite infrastructure is largely attributed to inadequate funding.

Table 20: ***Secondary Classrooms, Laboratories and WASH Facilities Constructed, 2018-2020***

	2018	2019	2020	% of planned
Classrooms constructed	2998	1197	342	29.9%
Laboratories constructed	464	207	74	9.8%
WASH facilities constructed	312	-	148	6%

Source: *Education Sector Report, 2020.*

It was also planned to review the differentiated unit cost for secondary education and review and implement guidelines for Form One selection, to incorporate an inclusivity dimension. The Ministry of Education has commissioned a study on equity financing in early learning and basic education, and the outcome of this study will be used to determine the differentiated unit cost at basic education. Guidelines for Form One placement has been reviewed in order to be fair to students in less endowed areas and in slums.

2.4.2 Policy priority 2: Equity and Inclusivity in Secondary Education

Goal: Reduce disparities in access to secondary education.
Policy Target(s): Reduce disparities based on gender, disability, location (rural/urban) and region in access to secondary education by 2022.
Programme 2.1: Reducing Disparities in secondary education.

The main outcomes for this policy priority could only be measured in two domains: gender and learners with special needs. In the first domain, the indicator available is the female/male enrolment ratio. The progress in this indicator for secondary enrolment has been significant, to the extent that the 2022 target of parity has already been achieved in 2019. Note that even though this indicator provides a good approximation, it does not measure the enrolment in relation to the respective population groups of female and male secondary school-aged children, which may vary the result in terms of parity.

As can be seen in Figure 8, there are more girls enrolled than boys in Forms One and Two, with the ratio decreasing in favour of boys' enrolments in older grades, opposite from the trend seen at primary education level (see Figure 8).

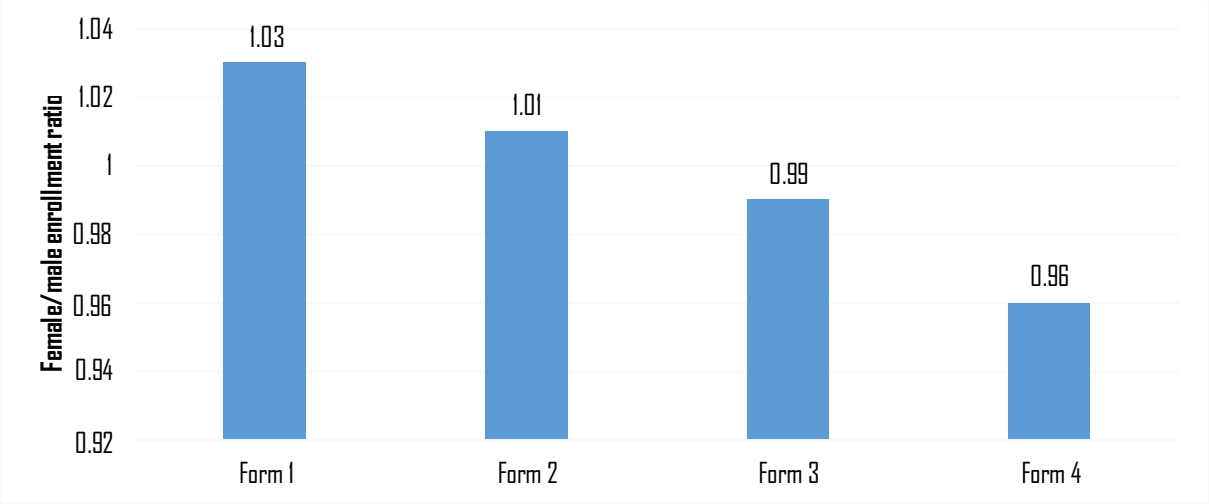

Figure 8: Female/male Enrolment Ratio by Secondary Forms, 2019
Source: *MoE, 2019 Basic Education Statistical Booklet, 2019.*

There were eleven counties in 2019 with female/male secondary enrolment ratios below 0.96. The largest disadvantage to girls is observed in Meru (ratio of 0.88) and Vihiga (ratio of 0.82) counties.

There has been minimal progress in the enrolment of students with special needs in public secondary schools over the plan review period, with a total of 4,794 SNE students enrolled in public secondary education in 2019. Although this is an increase of 19.3%, when looking at the total number of students enrolled per year, it can be observed that the proportion of SNE students enrolled was the same in 2017 and 2019, at 0.16%. There have been eight additional SNE public secondary institutions established between 2017 and 2019, representing a 7.5% increase from the baseline year. However, this is not satisfactory as surveillance report indicate on average there are about 11% of the children leaving with disabilities that should be in secondary schools.

Table 21: ***Share of SNE Enrolments, Total Enrolments and Number of Institutions in Secondary Public Education, 2017-2019***

	2017 Baseline	2018	2019
Share of SNE enrolments in public secondary education	0.16%	0.18 %	0.16 %
Total secondary public SNE enrolments	4,019	4,935	4,794
SNE public secondary institutions	106	109	114

Source: *Basic Education Statistical Booklet & Simulation Model, 2019.*

Due to the importance of good health in contributing to the ability of students to learn, medical insurance is provided to all students in public secondary schools registered on NEMIS. In 2018, 2.81 million students were insured. In the FY 2018/2019, 3.05 million students were insured. This medical cover is known as EduAfya and covers all ailments including optical and COVID-19 pandemic related costs.

At small scale, media has been used by partners for community engagement including interactive radio programmes that sensitize community on obstacles to education in ASAL areas including child labour, parental engagement in education and chore burden for girls. While results from these limited studies are small scale, they provide opportunities for scale up of capacity building of communities

through media. There are a number of activities that have not been undertaken. These activities are to:

i. Develop a framework to guide education interventions in vulnerable areas;
ii. Establish a fund to support learners from vulnerable backgrounds;
iii. Undertake community sensitization on prevention of child marriage; and
iv. Adapt existing infrastructure in secondary schools to facilitate inclusive education.

2.4.3 Policy priority 3: Improve the Quality and Relevance of Secondary Education

Goal: improve learning outcomes in secondary schools. Policy Target(s): Improve learning outcomes through competency-based education. Programme 3.1: Reform secondary education curriculum. Programmes 3.2: Reform learning assessment practices in secondary education. Programme 3.3: Provision of teaching and learning resources in secondary schools. Programme 3.4: ICT Integration in secondary schools. Programme 3.5: Enhance STEM, sports and talent in secondary education.

This NESSP 2018-2022 policy priority aimed to improve the quality and relevance of secondary education through curriculum reform, learning assessment reform, provision of teaching and learning resources, ICT integration and enhancing STEM and sports and talent. In order to assess the level of progress towards this outcome, the following section will provide both a review of major quality indicators, such as secondary retention, completion rates, and KCSE performance, as well as the status of selected outputs under the planned programmes. The secondary retention rate in 2019 from Form 1 to Form 4 was 103.3%. According to the Statistical Booklet 2019, the rate above 100% could be explained by: the school re-entry policy, deferred admissions and registration of private candidates for the end of secondary education examinations (Republic of Kenya, 2019, p. 24). This is a significant improvement from 82% retention rate recorded in 2016 in the Education Sector Analysis (Republic of Kenya, 2018), and is already above the 100% 2022 target.

Secondary education is a four-year cycle, which means students who were in Form 1 in 2015 would ideally have completed secondary education in 2018, and those who were in Form 1 in 2016 would have theoretically completed secondary education in 2019. Table 21 shows the respective completion rates for these cohorts in 2018 and 2019.

Table 22: ***Completion Rate for Secondary Education by Gender, 2018 – 2019***

	2018 (2015-2018 cycle)	**2019 (2016-2019 cycle)**
Boys	82.8%	94.85%
Girls	80.92%	93.44%
Total	81.56%	94.15%

Source: *Calculated for Data Obtained from Economic survey KNBS, 2020.*

As indicated in Table 21, the total completion rate for 2018 was 81.56%, with a 82.18% completion rate for boys and 80.92% completion rate for girls. This indicates that slightly more boys than girls completed the 2015-2018 school cycle. The total completion rate for 2019 was 94.15% with 94.85% boys completing the cycle compared to 93.44% girls, again a slightly higher completion rate for boys. The completion rate was notably higher in 2019 compared to 2018 by 12.6%, a very encouraging indication of progress.

Secondary students' achievement in the Kenya Certificate of Secondary Education (KCSE), has been improving every year since 2017. At the baseline year, 11.3% of students had achieved an average of C+ and above. This percentage increased to 13.7% in 2018 and 18% in 2019. When looking at scores by gender, it can be observed that boys are outperforming girls and that this gap has actually increased over the review period. In 2019, 20.1% of boys achieved C+ or above, compared to 15.7% of girls, a 4.4 percentage point difference. While in 2017, 12.9% boys had achieved an average C+ score and above, and 9.5% of girls, a 3.4 percentage point difference.

Table 23: ***KCSE Performance by Gender, 2017-2019***

	2017			2018			2019		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
# scoring C+ and above	41,105	28,275	69,308	53,676	37,342	91,018	72,031	53,809	125,840
% scoring C+ and above	12.9%	9.5%	11.3%	15.7%	11.5%	13.7%	20.1%	15.7%	18%

Source: *MOE Basic Education Statistical Booklet, 2019.*

As far as the planned activities under programme 3.1—Reform of Secondary Education Curriculum, the sector is currently in the process of developing Competency Based Curriculum and support materials for lower secondary, as well as adapting curriculum and materials for special needs students.

Table 24: ***Activities for Reforming Secondary Education***

Programme	Planned NESSP 2018-2022 Activity	Status of Implementation
Reform Secondary Education Curriculum	Develop Competency Based curriculum (CBC) and curriculum support materials for lower secondary education.	Curriculum designs for Grade 7-9 have been developed for all learning areas.
	Develop and adapt CBC and curriculum support materials for SNE.	The adaptation of Curriculum designs and curriculum support materials for SNE have not been developed pending the approval of regular curriculum designs.
	Develop a framework for rolling out CBC and providing transition for the proposed structure.	The framework for rolling out CBC was developed.
	Build the capacity of secondary school teachers on CBC.	The capacity build for secondary school teachers on CBC has not been achieved pending the finalization of curriculum and curriculum support materials for this level.

Source: *KICD & TSC reports, 2020.*

On reforming learning assessment practices in secondary education, Competency Based Assessment (CBA) Framework for basic education will progressively be reviewed and learners will be assessed at Grade 9 and Grade 12. Table 25 presents the status of implementation of activities under this programme.

Table 25: ***Activities for Reforming Secondary Education Assessment Practices***

Programme	Planned NESSP 2018-2022 Activity	Status of Implementation

Reform learning assessment practices in secondary education	Enhance the management of national examinations in secondary education	Management of National Examinations enhanced through use of multi-agency approach introduced in 2016 and maintained throughout the plan period. KCSE examinations irregularity maintained at below 1% from 2018 to 2020.
	Improve the system for evaluating school-based projects in secondary education	Since 2019 to 2021, the evaluation of KCSE projects is conducted twice yearly with the
	Review the Competency Based Assessment (CBA) Framework for basic education;	The CBA Framework to be progressively reviewed as CBC is implemented in Secondary School. This will commence in FY 2024/2025 when the framework will be developed up to Grade 9
	Build capacity of technical officers at KNEC on conceptualization, design and implementation of CBA for secondary education	To commence from FY 2023/2024 when Grade 7 (Secondary school) begins to be implemented
	Build capacity of teachers and education officers on CBA in secondary education	To commence from FY 2023/2024 when Grade 7 (Secondary school) begins to be implemented
	Establish a web-based portal to facilitate access to formative assessment at secondary school level	To be integrated with the web based portal developed for primary education by reviewing the portal
	Establish and maintain a secure item bank system for summative assessment in secondary education	Item bank system to be integrated with the primary school system
	Develop and implement the framework for participation in the Programme for International Students Assessment for Development (PISA-D	The process has been initiated. Discussions with the Organi zation for Economic Co-operation and Development (OECD) started in 2020. Official communication from OECD regarding participation was sent to the office of the Principal Secretary, State Department of Early Learning and Basic Education. It is envisaged that Kenya will join the PISA 2025 whose cycle commences in 2022.
	Develop and implement the framework for participation in the Trends in International Mathematics and Science Study (TIMSS).	Process will begin once the process of joining PISA has been finalised and implementation started.

In an effort to ensure a student textbook ratio of 1:1, the sector supplied Forms 1 to 4 with textbooks in 2018 and replenished them in 2019. Textbooks were supplied for the six core subjects of English, Swahili, Mathematics, Chemistry, Biology and Physics to secondary schools and for 14 elective subjects. Table 24 shows the total number of books supplied to students in secondary schools in 2018 and 2019. As indicated in the statistical booklet, in 2019 a student textbook ratio of 1:1 was achieved in the six core subjects.

Table 26: ***Secondary Textbook Provision and Replenishment, 2018 and 2019***

	2018 Provision		2019 Replenishment		2018 - Totals	2019 - Totals
	Core Subjects	Elective Subjects	Core Subjects	Elective Subjects		
Books supplied	21,948,774	14,786,293	18,054,181	9,068,686	36,735,067	27,122,867
Student enrolment	2,810,655	2,810,655	3,045,227	3,045,227	2,810,655	3,045,227
Number of subjects	6	14	6	6	20	12

Source: *KICD, 2019.*

The level of secondary ICT integration (programme 3.4) was to be determined through ICT expertise and ICT infrastructure in schools. The indicators were: ICT as a subject in secondary education, provision of computers, computer laboratories in schools and internet connectivity. The average performance in each of these indicators provide the total level of ICT integration. In 2018, due to change in the procurement processes, the activities on ICT integration were not completed and the number of schools integrating ICT remained the same. However, in 2019, the activities were accomplished and a monitoring exercise undertaken in January and February 2020 showed that 29% of schools had above 20 computers, 50% of schools had internet connectivity, 53% of schools had computer laboratories and 55% of schools taught ICT as a subject. On average, therefore, 46.5% of schools were integrating ICT. However, there are marked differences in how schools are integrating ICT; some regions are above others while there are some that are completely lagging behind as shown in Figure 9.

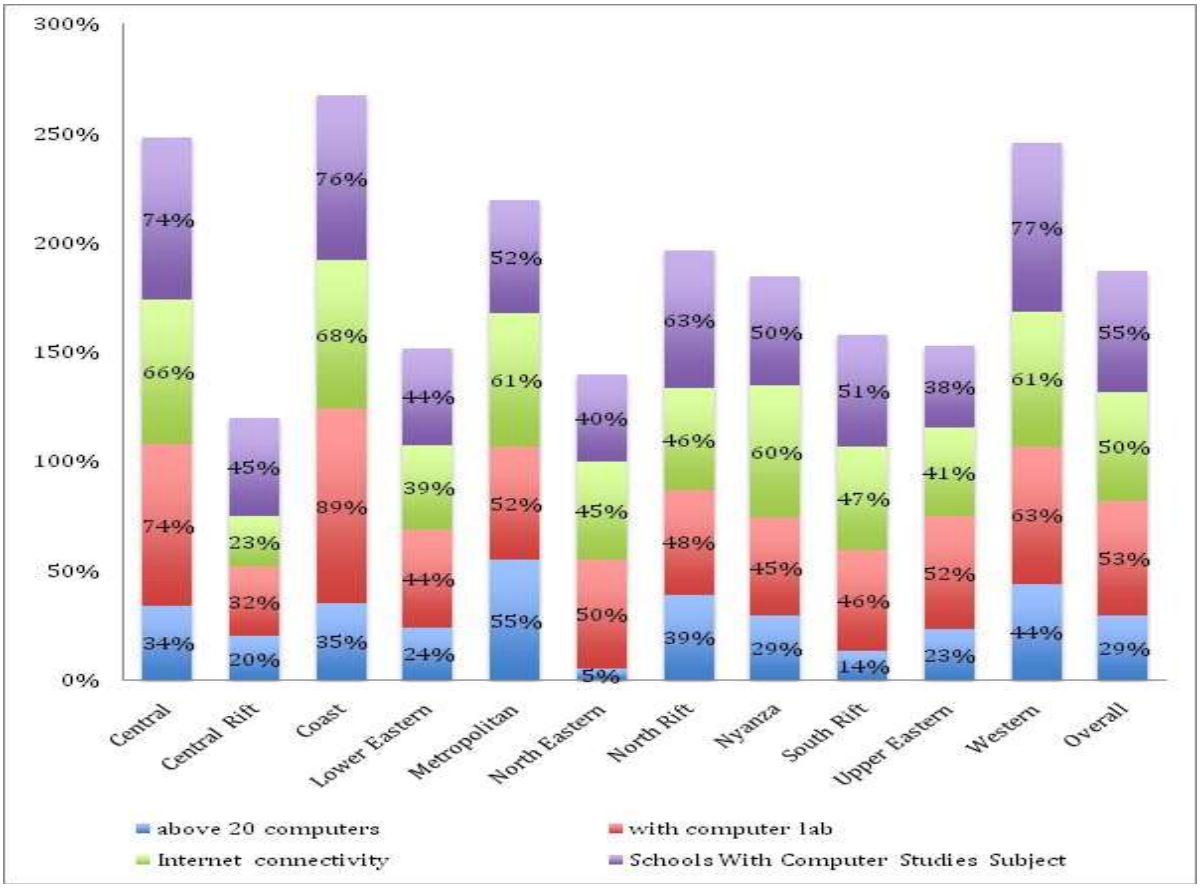

Figure 9: **ICT Integration in Secondary Schools**
Source: *MOE, Results from the Monitoring Exercise, 2020.*

As shown in Figure 9, the schools in various regions pose different results in each of the four areas that provide an indication of the level of ICT integration in secondary schools. Schools in coast indicate a high level of ICT integration while those in the North Eastern region post low levels of ICT integration. There are activities that have not been undertaken that include:

i. Build capacity of secondary school teachers and management on effective use of ICT in teaching, learning, assessment and management;
ii. Facilitate the development and dissemination of e-content for secondary education;
iii. Develop a monitoring and evaluation framework for assessing the impact of ICT integration in teaching and learning; and
iv. Establish an ICT integration in education support system for secondary schools at the national, county, sub-county and institutional level.

2.4.4 Policy Priority 4: Governance and Accountability in Secondary Education

Goal: Improve school level governance and accountability in secondary schools. Policy Target: Enhance capacity of school management in leadership. Programme 4.1: Improve school level management.

This policy priority focused on strengthening governance and accountability in secondary education through effective management of school resources. Several of the planned activities in this domain have been completed. One of these activities was the training of members of the Board of Management (BoM) on various issues including financial management. Table 27 shows the trainings accomplished in 2018.

Table 27: ***Number of BoM Members Trained on Diverse Dates in 2017-2018***

Date of Training	County	No. of schools	Total BoM Members Trained
24th July 2017	Marsabit	13	816
19th March 2018	Machakos	31	1,609
26th March 2018	Busia	17	1,992
26th March 2018	Vihiga	13	871
29th March 2018	Busia	17	1,008
17th April 2018	Machakos	31	1,827
8th May 2018	Bomet	22	1,515
9th May 2018	Bomet	22	1,555
10th May 2018	Bomet	22	1,541
11th May 2018	Bomet	22	1,552
23rd May 2018	Kisumu	23	1,468
26th May 2018	Kisumu	23	1,400
	Total	**256**	**17,154**

The sector also ensured that financial resources were allocated and utilized for intended purposes as auditing was accomplished in 10,066 schools in 2018. In the same period, 1,040 systems were reviewed, and 150 special audits were conducted. The sector also developed some manuals to improve financial management, including: (i) Schools audit manual to guide auditing of secondary schools; (ii) a risk-based audit approach manual to train auditors to enhance risk-based audits in schools; (iii) the performance scorecard for appraising the schools' auditors' performance; and, (iv) financial management manual to be utilized by secondary schools to improve financial management in these institutions of learning.

Enabling factors and Opportunities for Achievement of Objectives

Enabling factors for the Achievement made in Secondary Education

Increased enrolment of learners in secondary education can be attributed to funding from the treasury for FDSE capitation and infrastructure development and the implementation of the 100% transition from primary to secondary education policy. This resulted in improvement witnessed in Gross and Net enrolment rates;

a) Enhanced human capital with more teachers recruited and others capacity built on curriculum implementation enabled improvements in quality of secondary education programmes;
b) Good will from stakeholders; teachers' commitment in implementing the curriculum; and field officers' supervision and support enhanced access to secondary education; and
c) A conducive legal and policy environment. The Constitution of Kenya, the Basic Education Act (2013) provided the requisite legislation for the provision of secondary education.

Available Opportunities for Implementing Strategies on Secondary Education

There are opportunities that can be relied upon to undertake the activities meant to achieve the strategy:

a) Utilization of Current ICT Technology to Implement some of the Targets. For instance, the on-going re-engineering of NEMIS to include provision of data for all learners with various special needs and disabilities as those in vulnerable areas will enhance the availability of needed data to implement the strategies. Also, some of the targets especially those that require meetings. Virtual meetings can be held using the current technology';
b) The current push to ensure the implementation of the new curriculum where Junior Secondary is domiciled in secondary education. The new thinking in solving the implementation challenges in the

initiation stages may enhance provision of the much-needed infrastructure in the schools and also develop effective models of financing that may enhance achievement of equity and inclusion. The on-going study on equity-based financing in primary and secondary education will provide a good baseline upon which the differentiated unit cost will be developed; and

c) Development of key indicators at outcome level to focus the various agencies on what need to be achieved.

Challenges Encountered when Implementing Strategies for Secondary Education
Increase access and participation to Secondary Education

The strategy was to increase GER from 70.3 to 83% by the year 2023. Even though the GER increased it was lower than expected by the value. Whereas most activities were undertaken, there are those that have not commenced. These are:

a) Sensitize stakeholders and communities on the benefits of secondary education; and
b) Review the differentiated unit cost for secondary education including guidelines on school uniforms and meals.

The activities undertaken achieved various results. Some were above the expected targets while others were lower than the actual rate expected due to a number of challenges. The major challenges that led to the achievement being lower than the targets were:

a) Fiscal pressure resulting in diminishing funds for implementing the activities. The increasing demand from other sectors and the poor economic performance results in reduced resources for implementation of the strategy;
b) Inadequate human resources as the directorates charged with the responsibility have limited staff who cannot be replaced due to the on-going freeze on employment by the Government of Kenya;
c) Rigidity in the budget making process, which makes it difficult to introduce key activities needed in implementing the strategies. Some of the activities especially those on development of infrastructure are indicated as a process. However, the current situation is that no new project can be introduced until the current one is completed; and
d) Huge capital outlay required for the much needed for human resource capacity building, infrastructural development meant to increase classrooms, wash facilities, science and computer laboratories offices and provision of instructional materials including digital content for utilization of ICT models of delivery and management.

Equity and Inclusivity in Secondary Education

In order to enhance secondary retention, there was a need to address the disparity issues noted in secondary schools. Whereas progress has been made as measured by the female/male enrolment ratio and share of SNE learners in public secondary schools, the targets were not as expected. Share of SNE learners is still low, which can be attributed to some of the activities that were planned not taking place. These activities are:

a) Develop a framework to guide education interventions in vulnerable areas;
b) Establish a fund to support learners from vulnerable backgrounds;
c) Sensitize communities on cultural attitudes hindering access to secondary education, particularly for girls;
d) Undertake community sensitization on prevention of child marriage; and
e) Adapt existing infrastructure in secondary schools to facilitate inclusive education.

Besides some activities not being undertaken there were challenges in the implementation to achieve the strategy. These were:

i. Inadequate data on the actual number of learners in secondary schools where interventions are required. For example, there are some SNE learners who attend integrated schools, yet these schools

do not report on their existence. Hence the data used is that of severe cases of special needs learners and those with disabilities found in special needs schools only. It is also not clear the number of vulnerable areas that require the interventions;

ii. Fiscal pressure resulting in diminishing funds for implementing the activities. The increasing demand from other sectors and the poor economic performance results in reduced resources for implementation of the strategy;

iii. Retrogressive cultural practices, as well as inadequate community awareness on importance of secondary education and children's rights as provided for in legal frameworks in some regions and communities continue to increase the number of out of school children at secondary education level;

iv. Inadequate data on learners age specific from schools across the country makes it difficult for them to be mapped. Most school have not filled the actual dates of birth of the students on NEMIS leading to lack of key educational statistics and other global educational indicators; and

v. Stereotyping on gender issues in some community and regions impact on Gender Parity Index (GPI).

Improve the Quality and Relevance of Secondary Education

Improving the quality and relevance of secondary education is a key intervention in improving learning outcomes in secondary schools. The strategy was to improve learning outcomes through competence-based education by developing the curriculum for Junior Secondary Education, developing assessment tools, level of ICT integration in secondary schools and provision of learning materials. Measuring progress in this level was limited to integration of ICT in secondary schools and performance in the national examination. These measurements are inadequate compared to the activities that were planned. This includes:

- Build the capacity of secondary school teachers on CBC;
- Develop a framework for rolling out CBC and providing transition for the proposed structure;
- Develop and adapt CBC and curriculum support materials for inclusive education;
- Develop Competency Based Curriculum (CBC) and curriculum support materials for lower secondary education;
- Build capacity of teachers and education officers on CBA in secondary education; and
- Build capacity of technical officers at KNEC on conceptualization, design and implementation of CBA for secondary education;
- Develop the framework for participation in the Program for International Students Assessment for Development (PISA-D);
- Develop the framework for participation in the Trends in International Mathematics and Science Study (TIMSS);
- Enhance the management of National Examinations in Secondary education;
- Establish a web-based portal to facilitate access to formative assessment at secondary education;
- Establish and maintain a secure item bank system for summative assessment in Secondary education;
- Improve the system for evaluating school-based projects in secondary education;
- Review the Competency Based Assessment (CBA) framework for basic education;
- Review the existing Monitoring Learner Achievements (MLA) processes and tools against a sample of items from PISA-D and TMISS, and identify improvements needed in the overall MLA process;
- Implement the framework for participation in the Programme for International Students Assessment for Development (PISA-D);
- Implement the framework for participation in the Trends in International Mathematics and Science Study (TIMSS);
- Provide laboratories equipment to secondary schools;
- Review and disseminate science kits manuals to secondary schools;

- Build capacity of secondary school teachers and management on effective use of ICT in teaching, learning, assessment and management;
- Develop a monitoring and evaluation framework for assessing the impact of ICT integration in teaching and learning;
- Facilitate the development and dissemination of e-content for secondary education;
- Build capacity of teachers to implement STEM, sports and talents in secondary schools;
- Develop guidelines on identification, placement and development of gifted, and talented students; and
- Establish a model STEM and sports and talent secondary school in every county.

This means that whereas activities have been undertaken, the contribution to the outcome has not been easy to discern because of the following main challenges in implementing this strategy:

a) Some targets are not clear. For instance, on reforming curriculum as a programme, there are activities that have been undertaken. However, it is not easy to determine how such activities have contributed to current learning outcomes making such targets ambiguous;
b) Fiscal pressure resulting in diminishing funds for implementing the activities. The increasing demand from other sectors and the poor economic performance results in reduced resources for implementation of the strategy;
c) Inadequate reporting by the concerned agencies; and
d) Inadequate data on the actual number of learners in secondary schools where interventions are required. For example, there are some SNE learners who attend integrated schools, yet these schools do not report on their existence. Hence the data used is that of severe cases of special needs learners and those with disabilities found in special needs schools only. It is also not clear the number of vulnerable areas that require the interventions.

Priorities for the Remaining NESSP Implementation Period

They key priorities for the remaining NESSP period are organized in terms of short term, mid-term and long-term area priorities as shown in Annex 1.

2.5 Adult and Continuing Education

2.5.1 Policy Priority 1: Access and participation in ACE

Goal: Increase access and retention in ACE programmes. Target(s): Increase enrolment in ACE programmes by 10 percent. Programme 1.1: Expand Learning Opportunities in ACE.

Adult and Continuing Education (ACE) provides an alternative pathway with tailored programmes to meet the educational needs of the out-of-school children, youth and adults who, for whatever reasons, missed out of formal education. It was planned to expand learning opportunities in ACE by improving the learning environment and learning facilities. Enrolment in adult and continuing education has actually been decreasing over the plan period, from 227,322 enrolled students in 2017,to 180,395 in 2020. This constitutes a 25.20% decrease in enrolment. Enrolment of female learners reduced at the rate 22.7% in 2020 compared to the baseline. The fall in enrolment among male learners reached 16.7% during the same period. However. Enrolment in ACE significantly decreasedover the review period, constituting of 43.3% decrease in enrolment from 227,322 in 2017/18 financial year to 128,878 in 2021/22 financial year.

The 10% growth target that was expected by 2022 is therefore off-track and is lower than it was at the plan's baseline year. However, the sector is affected by more challenges like; inadequate funding, low awareness of ACE programmes, lack of coordination among various providers, and mass retirement of instructors without replacement. It can, however, be noted that this is a trend which began prior to the implementation of NESSP 2018-2022. Between 2012 and 2017 there was a 34% drop in in enrolment in ACE programmes, where in 2012, we had a total of 304,339 learners enrolled (Republic of Kenya, 2018).

Table 28: ***Enrolment in ACE and growth, 2017-2020***

	2017 Baseline	2018	2019	2020	2022 Target
Total ACE enrolment	227,322	212,341	209,182	180,395	-
Growth in ACE Enrolment	-	-8,50%	-11.60%	-25.20%	10%
Growth in enrolment F	156,504	-6.2%	-8.3%	-22.7%	-
Growth in enrolment M	70,818	-7.5%	-7.4%	-16.7%	-

Source: *KNBS Economic Survey, 2021.*

In 'expanding learning opportunities in ACE,' the programme had planned to establish 300 additional learning centres. The target is off-track because the number of learning centres reduced from 5,340 in 2018, to 4,824 in 2019. This was due to retirement of 1,090 instructors with out replacement. On the other hand, only 4 out of 300 Community Learning Resource Centres (CLRCS) were rehabilitated due to lack of funds, and no centre was equipped with relevant learning materials for supporting adult learners with disabilities. In the upgrading of Multi-Purpose Development Training Institutes (MDTI's) to Adult Education Training institutes, none had been upgraded because ACE teacher education curriculum has not yet been developed. While there is a central MoE policy of capitation for learners, the Directorate of Adult and Continuing Education learners do not benefit from capitation programme.

Table 29: ***Major Activities from ACE Programme 1.1***

Planned NESSP 2018-2022 Activities (selected)	Implementation status
Establish 300 additional learning centres	Off track; The number reduced from 5,340 in 2018 to 4,824 in 2019 due to retirement of instructors without replacement.
Rehabilitate 300 Community Learning Resource Centres (CLRCs)	Off-track; 4 out of the 300 CLRCs were rehabilitated due to lack of sufficient funds for the activity.
Equip 2,642 (50%) of the ACE institutions with facilities for supporting adult learners with disabilities	Off-track; No centre was equipped with the relevant learning materials to support adult learners with disabilities.
Upgrade the 5 MDTIs to adult education teachers training institutes	Off-track; None has been upgraded because ACE teacher-education curriculum supposed to be undertaken in the institutes has not been developed.

Establish 8 model ACE secondary boarding schools	Off-track; Only one ACE boarding secondary school was established in Isinya, Kajiado County.
Develop a framework for capitation for ACE programmes	Off-track; No framework for capitation for ACE programmes. Nonetheless, the Ministry of Education has a policy guideline on capitation for learners which only covers primary secondary and Technical and vocational Education learners.

2.5.2 Policy Priority 2: Quality and Relevance of ACE Programme

Goal: Improve quality and relevance of ACE programmes.
Target(s): Provide quality assurance and standards of learning and relevance in ACE.
Programme 2.1: Sustainable functional literacy.

The major goal of ACE programmes is to provide literacy, knowledge, skills and positive attitude to adults, out-of-school youth and children over fifteen years old. As can be seen in Table 27, a greater proportion of ACE learners have achieved functional literacy during the plan review period, doubling from 8% in the baseline year to 16% in 2019. Although this percentage has decreased back to 12% in 2020.

Table 30: ***Percentage of ACE Learners who have Achieved Functional Literacy, 2017-2020***

	2017	2018	2019	2020
% of ACE learners achieving literacy	8%	10%	16%	12%

Source: *KNBS Economic Survey, 2021*.

In examining the activities for this policy priority, it is on track because several of the planned activities for Programme 2.1 have been completed or are currently in progress. One Hundred (100) graduate instructors were recruited and deployed in the year 2020. The Directorate of Adult Education is yet to develop a Quality Assurance and Standards framework for ACE programmes. In curriculum review, a budget and activities for the review of ACE curriculum needs assessment proposal has been developed and is awaiting approval and allocation of resources by Ministry's Senior Management. In-service training for ACE instructors has not yet been done due to lack of funds, and the review of ACE instructors' curriculum has not yet started.

Table 31: ***Activities from ACE Programme 2.1***

Programme	Planned NESSP 2018-2022 Activities	Completion status
2.1: Sustainable Functional Literacy	Review ACE curriculum and support materials to integrate community education empowerment and development programmes;	The review of ACE curriculum is under way. The proposed activities are awaiting approval and allocation of resources by the senior management.
	Build capacity of ACE instructors through in-service training	In-service training for ACE instructors has not been done due to lack of training funds.

	Recruit and deploy additional adult education instructors	100 adult secondary education instructors have been recruited and deployed to facilitate adult education learners who are pursuing adult secondary education programme.
	Develop a quality assurance framework for ACE programmes	Quality assurance framework for the Ministry of Education is being undertaken by the Directorate of Quality Assurance and Standards.
	Review curriculum and training materials for ACE instructors (teacher education).	ACE teacher education curriculum covers certificate level. The proposed review and upgrading to diploma level is yet to begin.

Programme 2.2 focused on developing accelerated curricula for ACE learners. Most of the planned activities under this programme are off track, due to lack of funds. Prerequisite activities have not yet been undertaken. It is reported however that ACE curricula is still in its planning stages and will include the accelerated ACE curriculum. Table 32 provides additional details on these activities.

Table 32: ***Activities from ACE Programme 2.2***

Programme	Planned NESSP 2018-2022 Activity	Completion status
2.2: Accelerate Curricula for ACE Learners	Development of ACE primary accelerated curriculum	ACE curriculum, which is in Planning stage will include ACE primary accelerated curriculum.
	Development of ACE primary accelerated curriculum support materials	The support materials for ACE primary curriculum shall be developed after the curriculum is developed. So far, ACE primary accelerated curriculum has not been developed.
	Build capacity for ACE primary instructors	Capacity building for ACE primary instructors has not been done due to unavailability of funds.
	Develop the qualification framework for ACE	The qualification framework has been developed by The Kenya National Qualification Authority. However, the framework does not equate the Non-Formal/ACE institutions.
	Develop framework for rolling out ACE accelerated curriculum	The framework has not been developed because ACE accelerated curriculum has not been developed.
	Development of ACE secondary accelerated curriculum	This has not been developed due to lack of a qualification framework for Non-formal/ACE institutions. ACE secondary education programme therefore follows the formal education curriculum, which is nationally recognized.
	Development of ACE secondary accelerated curriculum support materials	The support materials have not been developed because there is no ACE secondary accelerated curriculum. The learners at this level use the formal education curriculum support materials.
	Build capacity for the ACE secondary instructors	Capacity building trainings for the instructors was planned to take place in the year 2021 but due to the Ministry of Health (MOH) control measures to curb

Programme	Planned NESSP 2018-2022 Activity	Completion status
		the spread of COVID – 19, the trainings were suspended until further notice.

Programme 2.3 of NESSP aims to integrate ICT in teaching, learning and assessment in ACE. Table 26 shows the evolution of the percentage of ACE institutions, which are integrating ICT in teaching, learning and assessment.[1] Although an improvement from the zero baseline, the progress in integrating ICT is very slow, and has even decreased from 4% of institutions in 2018, to 2% in 2020.

Table 33: ***Percentage of ACE Institutions Integrating ICT, 2017-2020***

	2017	2018	2019	2020
% of ACE institutions integrating ICT in teaching, learning, assessment	52	4%	3%	2%

Source: *DACE Report, 2021.*

2.5.3 Policy priority 3: Governance and Accountability in ACE institutions

Goal: Improve governance and accountability in ACE programmes.
Target(s): Enhance capacity of ACE institutions management and BoMs.
Programme 3.1: Strengthen ACE management structures.

In order to strengthen the capacity of ACE management structures and the accountability of ACE institutions, it was intended to provide 3,875 ACE institutions with training in public financial management topics. However, only 380 institutions received training during the review period hence it is off track.

Table 34: ***Percentage of ACE Institutions Received Training in Public Financial Management Topics***

	2017	2018	2019	2020
% of ACE institutions received training in public financial management topics	3,785	240 or 6%	138 or 3.5%	2 or 0.05%

NB: the % is calculated as: the number of ACE institutions that received training in public finance management over the intended number to be trained per year.

Enabling factors and opportunities that influenced achievement of planned interventions

1. Constitution of Kenya, Article 43(I) (f) which states that every citizen has a right education;
2. The Basic Education Act No. 14 0f 2013 recognizes adult education as a form of lifelong learning in which an adult or out of school youth aged 18 years and above is granted an opportunity of accessing education in an institution of basic education, and or through distance learning;

[1] The percentage of ACE institutions integrating ICT into teaching, learning and assessment is measured by considering the number of institutions which have computers and use e-content in delivery of lessons over the total number of ACE institutions, as well as the number of institutions that use computers to set and analyze assessment tests.

3. Over 7,120,542 Kenyans aged 3 years and above have never attended school/learning institution hence need to expand ACE learning opportunities; and
4. 1,004,427 Kenyans aged 6 -13 years have never been to school/learning institution.
5. 399,731 Kenyans aged between 14 - 17 years have never been to school/learning institution;
6. 486,534 Kenyans aged 18 – 22 years have never been to school/learning institution;
7. While 3,658,989 Kenyans aged 23 years plus have never been to school/learning institutions.
8. The Sustainable Development Goals (SDGs), Goal 4 Target 4.6 aims to ensure all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy by 2030.
9. The Bill of Rights, Article 26 of the Universal Declaration of Human Rights, which states that everyone has the right to education.
10. The African Charter on Human and People's Rights, Article 17 (I), which states that every individual shall have the right to education.
11. Pan African Conference on Education (PACE), 2018, Nairobi Declaration commits to promoting Lifelong Learning for ALL (LLA) at all levels using diverse and relevant modes of learning with flexible pathways between formal, non-formal and informal to cater for all children and others.
12. Opportunities Encountered during Implementation, which had a Positive effect on the Progress toward the Outcomes.
13. Recruitment of one hundred graduate instructors to offer services in adult secondary education programme.

Challenges Faced during the Implementation Period

1. Low awareness of ACE programmes and lack of coordination, among providers;
2. Mass retirement of instructors without replacement;
3. Lack of a relevant ACE curriculum that addresses the needs of the 21st century out of school youth and adult learners. Weak links between various providers of ACE;
4. Inadequate funding of ACE programmes, inadequate teaching staff and inadequate infrastructure; and
5. Unreliable data for decision making.

Actions that have been taken to Address these Challenges

1. Undertake advocacy and mobilization activities to enhance awareness.
2. Advocate for recruitment of more adult education instructors.
3. Reform ACE curricula.
4. Strengthening of the special board of Adult Education.
5. Undertake National Literacy survey. Impact of COVID-19 pandemic to education.
6. Priority Interventions for the Remaining NESSP period
7. They key priorities for the remaining NESSP period are organized in terms of short term, mid-term and long-term area priorities as tabulated in Annex.

2.6 Inclusive Education for Learners and Trainees with Disabilities at Basic Education

2.6.1 Policy priority 1: Access and participation of learners and trainees with special needs and disabilities

Goal: Enhance the provision of inclusive education and training for learners and trainees with disabilities. Target(s): Increase access and participation rate of learners and trainees with special needs and disabilities in primary and secondary by 2022. Programme 1.1: Progressive Transition to Inclusive Basic Education Programme 1.2: Functional Assessment and Early Intervention Services in Education and Training

Table 28 shows an increase in the proportion of learners with special needs within total public primary school enrolments from 1.36 % in 2018, to 1.6% in 2019. This corresponds to an increase of 14,937 learners, from 121,144 in 2018 to 136,081 in 2019. The increase was however still behind the 2.2% 2019 target.

At secondary level, the table below shows the data of SNE learners under capitation depicting no notable improvement in the proportion of SNE learners enrolled in public schools, which was at 0.15% in 2019, about the same level as at the baseline year. It is important, however, to note that as at 2019, there were 14,153 SNE learners spread out in special and regular (integrated) secondary schools as per NEMIS database, out of whom only 4,794 were under capitation and whose data was used in the Table 35.

Table 35: ***Share of SNE Learners in Public Primary and Secondary, 2018-2019***

	2018	2019	2022 Target
Share of SNE learners in public primary	1.36%	1.6%	5%
Share of SNE learners in public secondary	0.16%	0.15%	-

Source: *MoE, Basic Education Statistical Booklet, 2019.*

The majority of activities planned in NESSP 2018-2022 for this policy priority have not been completed. Only a handful of the activities in Programme 1.1: *Progressive Transition to Inclusive Basic Educatio*n and Programme 1.2: *Functional assessment and early interventions services in education and training* were carried out. Chiefly among these, a needs assessment on specialized learning resources, assistive devices and technologies, for their subsequent provision, was carried out at class 7 and 8 in 2018, as part of the SEQIP project. In addition, a Differentiated Unit Cost (DUC) proposal of funding special needs education based on learners' disability category was developed.

Within Programme 1.2, the construction of a National Referral Psycho-Assessment Centre at KISE was completed. There was also partial infrastructure upgrade of two EARCS -in Nairobi (St. Paul's) and Garissa through UNICEF partner support. It was intended in the Plan, to upgrade 50 EARCs. There will be a need therefore, to complete the upgrade of the two EARC centres in the remaining Plan period towards strengthening of functional assessment.

2.6.2 Policy Priority 2: Quality and Relevance in Education and Training for Inclusive Education

Goal: Enhance learning for children with special needs and disabilities
Programme 2.1: Curriculum adaptation for inclusive education
Programme 2.2: Friendly learning environment for inclusive education
Programme 2.3: Human resource development for effective inclusive education

Status of Achievement

Three programmes were planned in order to improve the quality of learning for children with special needs and disabilities: Adapting the inclusive education curriculum; improving the learning environment of special needs students; and enhancing the capacity of staff to deliver services to learners with special needs. Only a few of the planned activities under these programmes have been completed so far in the planned period. The adaptation of curriculum by KICD for the scheduled grades/levels is on targets as well as built the capacity of teachers and field officers on the

implementation and assessment of the adapted curriculum as indicated in Table 33: (*Proportion of curriculum materials adapted to special needs and disabilities).*

The recruitment and training of school teachers on SNE diploma at KISE is also on target as at mid-term review. The institutions safety standards policy to integrate inclusive education has been reviewed, and the enforcement of the safety standards manual for schools with learners with disabilities is on-going. The construction of sanitation and clean drinking water facilities is undertaken by individual schools as need arises and subject to available resources.

2.6.3 Policy priority 3: Governance and Accountability in Inclusive Education

Goal: Enhancing Participation and Stakeholder Accountability in the Management of Inclusive Education
Programme 3.1: Advocacy, Partnership, Collaboration and Coordination
Programme 3.2: Competency Assessment Reforms for Learners with Special Needs and Disabilities

One of the planned activities in this policy priority was to develop an inclusive education module in the National Education Management Information System (NEMIS), to ensure that there is relevant data to inform interventions, coordination and advocacy on SNE issues. This activity has been achieved, as evidenced by annual statistical reports of the MoE, which include a section based on this module (e.g. Basic Education Statistical Booklet, 2019).

At least two advocacy and awareness campaigns on education and training for learners with special needs and disabilities were conducted during teachers' conferences in 2018 and 2019. Reforms being undertaken by KNEC in collaboration with MoE and TSC on competency-based assessment (CBA) of learners with special needs and disabilities are on target. The reforms include the review of CBA framework to suit assessment needs for learners with special needs and disabilities, capacity building of teachers and the adoption of the web-based portal for access to formative assessment material. The other planned activities have not yet been completed.

Enabling factors for the Achievements made in Inclusive Education
The gradual growth in enrolment of learners with special needs and disabilities at primary and secondary education can be attributed to the continued GoK intervention of disbursement of FPE and FDSE capitation, tuition top-up and boarding subsidy grants to SNE learners which enhances access and retention.

The completion of construction of the national referral psycho-assessment centre at KISE was achieved through consistent GoK budgetary allocation for this identified priority project
The needs assessment carried out at class 7 & 8 on assistive devices and learning resources through the SEQIP project, as well as the partial upgrade of two EARC centres (Nairobi & Garissa) underscores the value of public-private partnership synergies in mobilization of financial resources for education.

The achievements made so far in adaptation of the curriculum, reforms in competency-based assessment and capacity building of teachers on inclusive education have been realized through the necessary resource allocation and effective coordination and collaboration among the implementing agencies.

Challenges Encountered in Implementation of Planned Priority Programmes and Activities

1. Inadequate or lack of budgetary allocation for most of the planned priority programme activities especially on infrastructure.
2. Many targets and activities planned for implementation were not achieved due financial resource constraints experienced with the plan period under review.
3. Emergence of covid-19 pandemic resulted in economic down-turn, austerity measures and stringent pandemic containment measures which hampered implementation of planned activities.
4. Inadequate capture of disability-specific SNE data on NEMIS platform at pre-primary, primary, secondary and teacher training levels.

Priorities for the Remaining NESSP Implementation Period 2021-2027

They key priorities for the remaining NESSP period are organized in terms of short term, mid-term and long-term area priorities as presented in Annex 1.

2.7 Teacher Education, Professional Development and Management

2.7.1 Policy priority 1: To Re-brand the Pre-service Teacher Training

Goal: Align teacher training to the requirements of the Competency Based Education. Target(s): To produce teachers with requisite skills to implement the CBC. Align pre-service teacher education to Competency Based Education. Programme 1.1: Pre-Service Teacher Training Reforms.

A series of pre-service teacher training reforms were envisioned to re-brand pre-service teacher training and align it with the new Competency Based Curriculum. Table 33 shows the status of the planned activities under this programme, most of which have been successfully carried out, or are in the process of development. Notably, the teacher education framework for pre-primary, primary and secondary levels has been developed and new minimum entry requirements have been established for all teacher trainees. Guidelines on the identification and deployment of teacher educators in teacher training institutions are also currently being developed. The programme is on course to being finalized. Key achievements include finalization of the teacher education policy. Teacher Trainees have been selected using the current guidelines. Furthermore, five teacher training colleges have been identified for rehabilitation of infrastructure to make them conducive for teacher training.

Table 36: ***Activities from Teacher Education Programme 1.1***

Programme 1.1 Planned NESSP 2018-2022 Activity	Implementation status
Undertake a study to evaluate the status and relevance of existing pre-service teacher training programmes.	A needs assessment was carried out by KICD in 2016.
Review the curricula and assessment framework for pre-primary, primary and secondary school pre-service teacher training.	Curricula and assessment framework for pre-primary, primary and secondary school, and pre-service teacher training has been developed.

Rehabilitate the existing colleges for pre-service training on the reformed curriculum	Funds have been disbursed for the rehabilitation of 5 old Teacher Training Colleges (Migori, Asumbi, Eregi, Baringo and Thogoto) out of the 16 old teacher training colleges.
Develop guidelines for identification and deployment of teacher educators in teacher training institutions	The guidelines for identification and deployment of teacher educators in teacher training institutions are being developed.
Induct educators in all teacher training institutions on the reviewed curricula	Completed.
Develop a framework to institutionalize internship programmes for all persons entering the teaching service	A policy on internship has been developed.
Review policy framework to establish minimum entry requirements for trainees at all levels	The diploma teacher education trainees were admitted in the May 2021 intake using the established minimum entry requirements.

2.7.2 Policy Priority 2: Effective Recruitment and Deployment of Teachers

Goal: To enhance universal basic education
Target (s): i. Reduce the teachers hired by the BOMs in public primary and secondary schools from the current 80,000 teachers to 23,000
ii. Provide all the requisite teacher requirements to realize the 100% transition from primary to secondary schools
iii. Recruit additional teachers to progressively improve the teacher-pupil ratio to 1:40
Programme 2.1: Recruitment of teachers for public primary and secondary schools.

The policy target was to recruit additional teachers to improve the pupil teacher ratio at both Primary school and secondary school level to reduce the burden borne by parents through recruitment of BoM teachers. Under the programme TSC was to recruit 13,300 teachers annually and an additional 12,700 to cater for the 100% transition to secondary school. By the Midterm of implementation of the NESSP period, the total number of teachers recruited was 23,700, out of a target of 52,200, this being slightly lower than 50% of the requirement. All the recruited teachers were deployed to secondary schools, to cater for the increase in enrolment due to the 100% transition policy. However, at primary school level, intern teachers were recruited which led to reduction in the number of teachers om BOM terms. The expected outcome of this policy priority area is to progressively improve the pupil-teacher ratio to 40:1 for primary schools and 35:1 for secondary schools, and thus provide all the requisite teacher requirements to realize the 100% transition from primary to secondary schools.

The 2019 pupil-teacher ratio in public primary schools was 38.6:1, already achieving a ratio above (and therefore better than) the 2022 target. However, as the PTR did increase between 2017 and 2018, and given that enrolments have continued to grow, these figures should still be carefully monitored during the rest of the Plan period, to ensure that progress remains on track.

Table 37: ***Pupil-teacher ratio in public primary schools, 2018-2021***

	2017 Baseline	2018	2019	2020	2021	2022 Target
Pupil teacher ratio in public primary schools	40.7:1	41.2:1	38.6:1			40:1

Source: *MoE Basic Education Statistical Booklet, 2019*

On teacher shortages, Table 38 presents the situation.

Table 38: ***% of Primary and Secondary Schools Presenting a Teacher Shortage, 2018-2021***

	2018	2019	2020	2021
% of primary schools that present teacher shortage	73%	71%	70%	
% of secondary schools that present teacher shortage	86.63%	86.63%	84%	

2.7.3 Policy priority 3: Effective Distribution and Utilization of Teachers

Goal: Improve equity and inclusivity in the utilization of the teacher resource.
Target (s): i. Reduce regional disparities in teacher distribution to attain parity in TPR of 1:50 across count.
ii Establish differentiated staffing norms in marginalized regions and areas of extreme low enrolment 60.
Programme 3.1: Equitable and Optimal Utilization of the Teaching Resource.

In order to improve on equitable teacher deployment practices, it was planned that a review on teacher staffing norms at basic education be undertaken and a policy framework on the distribution of teachers at all levels be developed. Consequently, new staffing norms are under development and the policy framework on distribution of teachers will be finalized after the completion of the staffing norms.

As for the current state of teacher distribution, when looking at public primary PTR by county, it can be observed that there are disparities among counties. In 2019, there were twenty-one counties with primary PTRs above the 40:1 2022 target, including six counties with primary PTRs above 50:1. The highest pupil-teacher ratios are registered in Turkana (80.3:1) and Mandera (73.5: 1) counties. The sector continues to implement policies aimed at reducing these gaps. One such policy focuses on not transferring teachers until the end of 5 years from time of recruitment in high potential areas, and 3 years in case of North Eastern regions. Posting of newly recruited teachers based on relative shortages has also reduced the disparities.

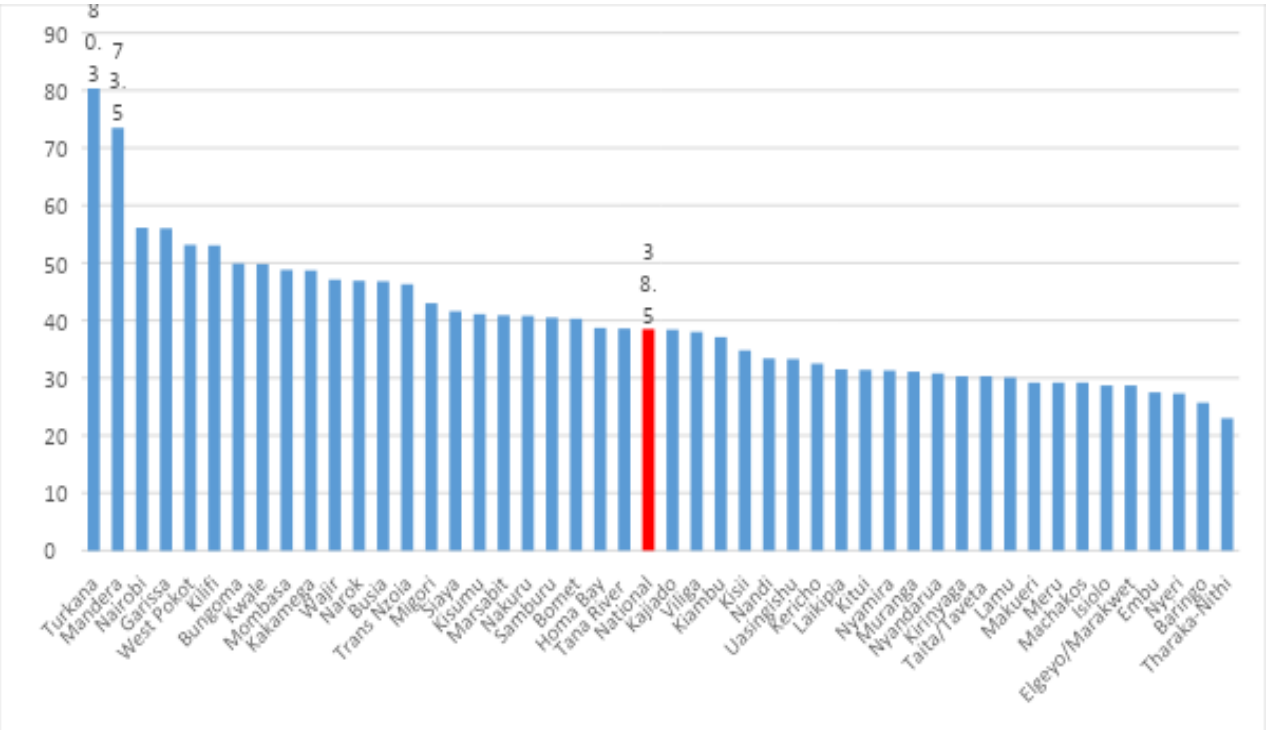

Figure 10: **Number of students per teacher in public primary schools, by county, 2019**
Source: *MoE, Basic Education Statistical Booklet, 2019.*

2.7.4 Policy priority 4: Teacher's professional and pedagogical content knowledge

Goal: To improve teachers' competencies and professional development. Target(s): Institutionalize a Teacher Professional Development Framework by 2020. Programme 4.1: Enhance Teacher Professional Development at Cluster and School levels.

This policy priority aimed at improving teacher's professional development through operationalizing the Teacher Professional Development (TPD) Programme; mainstreaming School-based Teacher Support System (SbTSS); providing TPD modules to all teachers; establishing and equipping TPD resource centres and identifying service providers.

As can be observed in the Table 36, many of the planned activities in this programme have been completed, particularly in the training activities. In training, 22,042 teachers have been trained and are practising the SbTSS; 1,492 officers were trained on the new TPD online system; 1,400 CSOs and 7 regional QASOs were trained for on-site coaching and guidance to teachers in their schools including those in refugee and host communities; and 1,400 TOTs and 30 Masters trainers trained on using technologies in teaching and learning. Additionally, the introductory of TPD module and the Teacher Level 1 module have been aligned to the competency-based curriculum. Moreover, School Based Professional Communities have been institutionalized, and 4 TPD service providers for prescribed modules were identified, while a register was opened for service providers not offering the prescribed modules.

Table 39: ***Activities from Teacher Education Programme 4.1***

Programme 4.1 Planned NESSP 2018-2022 Activity	Implementation Status
Establish and implement School and Cluster Level Professional Learning Communities (Teacher Research Groups/ Lesson Study Groups); School based teacher support	This was undertaken by the SBTSS SEQIP programme. During the review period, schools were identified and training of teachers on School Based Teacher Support System conducted. There was monitoring of the practice and institutionalization of School Based Professional Learning Communities. Teachers numbering 22,042 are practising SBTSS.
Build capacity for TSC field officers on ICT integration in TPAD process	Training of TPAD Master Trainers/ Headquarters and Counties ICT Officers on the new TPD Online System done. On the training of CDs, DCDs, SCDs and CSOs on the new TPD Online System, about 1492 officers have been trained. TPAD is now rolled out to all schools and teachers in Kenya.
Train CSOs and QASOs for on-site coaching and guidance to teachers in their schools, including those in refugee and host communities.	A total of 1400 CSOs and 7 Regional QASOs trained on on-site coaching and guidance to teachers in their schools, including those in refugee and host communities.
Develop and align TPD modules with the Competency Based Education at various levels.	TPD Introductory Module and TPD Teacher Level 1 module aligned to CBC
Establish and update a database on service providers for TPD at all levels.	During the review period, 4 TPD services providers for prescribed modules were identified and a register opened for other providers not offering prescribed modules. The database is on course to being updated.
Implement the school-based teacher support for improved TUSOME/EGM teaching methodologies, aligned to the early years CBC activities	There was training of teachers on the School Based Teacher Support System, and monitoring of the practice as well as institutionalization of School Based Professional Learning Communities. EGM methodologies have been aligned to CBC and teachers for Grades 1-3 have been trained.
Introduce ICT enabled teaching and learning support materials for EGM.	Master trainers, TOTs trained on use of technologies in teaching and learning, with 1400 TOTs and 30 Master Trainers being trained.

2.7.5 Policy priority 5: Governance and Accountability in Teacher Education, Professional Development and Management

Goal: To improve coordination, accountability and management of the teaching resource. Target(s): i. To develop and implement a governance and accountability framework in sourcing, development and management of the teaching resource by 2020; and ii. To develop and implement a Performance Management Framework for teachers at the school level. Programme 5.1: Coordination in Teacher Education and Professional Development.

Many of the planned NESSP 2018-2022 activities for governance and accountability in teacher education, professional education and management have been completed. National policy guidelines for teacher education and development have been completed and is in use; the Teacher Performance Appraisal and Development (TPAD) online system and TPD module were developed and 100% of school are now captured on the online TPAD system; TPAD teaching standards have been reviewed and there is continuous monitoring of TPAD implementation. In addition, TPD is aligned to TPAD subsystems and a web-based portal was developed for accessing teacher data. TPAD master trainers were also trained on analysis and report writing of the TPAD process. Additionally, In-service training on CBC was conducted, covering over 50% of teachers. This target in on track.

Enabling Factors and Opportunities

Overall, the sector was able to complete its planned programmes due to availability of funding through the MTEF Process, and putting a strong project implementation framework in place. Other enabling factors were the good will from stakeholders, including development partners, and commitment in implementing the curriculum from both teachers and field officers, who also played the role of supervising the training. The existence of a pool of trained and registered teachers made it possible for the Commission to fill all advertised posts either for internship or permanent and pensionable positions. The development and roll out of policy on intern teachers helped the sector to reduce the teacher shortages.

Challenges

One of the main challenges was improving pupil teacher ratios, to facilitate curriculum implementation. The number of teachers recruited during the review period was still below the requirements, which negatively affected curriculum implementation. This was caused by lack of funding to recruit an adequate number of teachers in 2019 and 2020 albeit increase in enrolments and number of schools . Furthermore, the hard to staff areas, especially North Eastern and upper Eastern regions continued to experience a shortage. The shortages for primary and secondary levels are shown in Table 35 in 2020, 70% of primary schools and 84% of secondary schools had a teacher shortage.

The other issue is litigation over the TPD process which had delayed implementation of some activities aimed at improving pedagogical and professional knowledge of teachers. COVID -19 pandemic affected implementation of trainings and meetings, as they could not be held physically. To this end, virtual methods in line with the WHO MoE and protocols were encouraged.

Priority Interventions for the Remaining NESSP period

They key priorities for the remaining NESSP period are organized in terms of short term, mid-term and long-term area priorities as displayed in Table 20.

2.8 Vocational and Technical Training (VTT)

Public technical and vocational education and training in Kenya is offered at four levels: Artisan level in Vocational Training Centres (formerly Youth Polytechnics) and on-the-job training in the formal sector and informal sector (Jua Kali apprentices); Craft level in Vocational Training Colleges or Technical Training Institutes (TTIs) and Institutes of Technology (ITs); Technician level in National Polytechnics (NPs) and a few selected TTIs, ITs and Technologist in National Polytechnics and Universities. Other public TVET institutions offering technical specialized courses include Agricultural Colleges, the Kenya Railway Training School, Kenya Institute of Mass Communication, the National Youth Service, industrial training centres, Young Men's (and Women's) Christian Association (YMCA and YWCA) vocational training centres and christian industrial training centres. There are also various TVET institutions privately run by private individuals, NGOs and religious institutions.

2.8.1 Policy Priority 1: Access and Participation in TVET

Goal: Promote acquisition of market - ready skills at TVET level.
Target(s): Improve enrolment per 100,000 from 446 to 780 by 2022.
Programme 1.1: Infrastructure Development and Equipment in TVET.
Programme 1.2: Rebranding and Repositioning TVET.

There has been a significant growth in the number of institutions and student enrolment in TVET institutions over the review period. As at 2017, there were 899 Public Vocational Training Centres; 47 Private Vocational Training Centres; 91 Public Technical and Vocational Colleges; 627 Private Technical and Vocational Colleges and 11 National Polytechnics. In the FY 2020/21, the number of institutions increased as follows: 1156 Public Vocational Training Centres; 83 Private Vocational Training Centres; 230 Public Technical and Vocational Colleges; 820 Private Technical and Vocational Colleges and 12 National Polytechnics. An overall increase of 183,840 (43.17%) trainees was registered between 2017 and 2020 compared to the baseline level, with 451,205 students enrolled in 2020. This achievement surpassed the 2022 target of 315,158 students. There has also been consistent growth in the number of female students, although enrolment of male students has increased at a higher rate than females (54.76%, compared to 30.14% for females).

Table 40: ***Total TVET Enrolment and Growth of TVET Enrolment, 2017-2020***

	2017 Baseline	2018	2019	2020	2022 Target
Total TVET enrolment	267,365	359,852	430,598	451,205	315,158

Total Female TVET enrolment	117,869	157,373	184,112	193,121	148,395
Total Male TVET enrolment	149,496	202,479	246,486	258,084	166,762
Growth of TVET enrolment from baseline year	-	34.6%	61%	43.17%	-
Growth in enrolment for Female	-	33.5%	56.2%	30.14%	-
Growth in enrolment for Male	-	35.4%	64.8%	54.76%	-

Source: *Economic Survey, 2021*.

The growth in students' enrolment was facilitated by the implementation of two key programmes: Infrastructure Development and Equipment in TVET, and Rebranding and Repositioning TVET. The sub sector has managed to construct TVCs in 237 constituencies out of the targeted 290 constituencies. The construction of TVCs, is being undertaken in phases (Phase 1 of 2; Phase 2 of 9, Phase 3 of 60, phase 4 of 70 and phase 5 of 30). Furthermore, construction of 30 TVCs is on-going. The rehabilitation of existing TTIs and equipping them with state of the art equipment has been undertaken in 186 TVCs against a target of 298 departments in TVCs. Out of the 47 targeted model VTCs, only 10 have been provided with modern training equipment.

Development of TVET Financing Policy is on track at 85% completion. The policy shall highlight sources of funds and priority areas for funding in TVET. In order to effectively implement the policy, the subsector will develop and implement a Differentiated Unit Cost for TVET. In relation to rebranding the sub sector, TVET fairs are conducted yearly both at regional and national levels. Additionally, a national communications and advocacy strategy is under development and it will guide in popularizing TVET.

Table 41: ***Activities from TVET Programmes 1.1 and 1.2***

Programme	Planned in NESSP 2018-2022	Completion status
1.1: Infrastructure Development and Equipment in TVET	Complete construction of at least one TVC in every constituency	Constructed TCVs in 237 out of 290 constituencies (Construction of 30 TVCs ongoing)
	Rehabilitate existing TTIs and equip them with state of the art equipment	Carried out in186 TVCs
	Provide modern training equipment to 298 departments in 298 TVCs	Provided in 186 TVCs
	Provide modern training equipment to 47 model VTCs	Provided to 10 VTCs

1.2: Rebranding and Repositioning TVET	Develop and implement a Differentiated Unit Cost model for TVET	TVET Financing policy is 85% complete
	Recruit adequate human resources for TVET Funding Board	A selection panel was put in place to operationalize the board in FY 2019/20
	Provide capitation grants to VTCs and TVCs trainees	Disbursed capitation amounting to Kshs 2,446M, Kshs 2,673M and Kshs 4,946M in the FY 2018/19, FY 2019/20 and FY 2020/21, respectively.
	Conduct public TVET fairs, technology contests and outreach programmes;	TVET fairs conducted yearly, both at regional and national levels
	Undertake TVET advocacy campaigns.	A national communications and advocacy strategy under development. Ad hoc communication activities to popularize TVET carried out

The subsector is on track in disbursing capitation grants to VTCs and TVCs trainees. The sector disbursed capitation amounting to Kshs 2,446M, Kshs 2,673M and Kshs 4,946M in the FY 2018/19, FY 2019/20 and FY 2020/21, respectively. The TVET HELB loan expenditure grew from Kshs 300M in FY 2018/19 to Kshs 4,062M for FY 2019/20 but reduced to Kshs 2,555M in FY 2020/21. The capitation grants enabled more trainees to afford and enrol in TVET institutions. In July 2018, the government initiated reforms on TVET training costs, by reducing 30 percent of the fees to make it affordable. The fees are offset through government payment of capitation grants at the rate of Ksh 30,000 for every trainee admitted to TVET and meeting all the requirements. The balance of the fees is catered for by parents, community and other partners/guardians. Additionally, the trainees are eligible for a government loan through the Higher Education Loans Board (HELB) amounting to Kshs. 40,000 per year. Part of the loan goes towards payment of tuition fee while part of it is given to the beneficiary student for upkeep.

8.2. Policy Priority 2: Enhance Equity and Inclusivity in TVET

Goal: Improve parities in TVET training.
Target(s): Improve GPI in TVET from 0.78 in 2016 to 1 by 2022; and increase enrolment for SNE trainees by 20%.
Programme 2.1: Inclusive Training in TVET.
Programme 2.2: Talent Development and Mentorship.

The female to male TVET enrolment ratio has slightly decreased over the plan period, from 0.79 in 2017 to 0.75 in 2020, indicating that there are still challenges to attracting female trainees in TVETs.

Therefore, the female/male enrolment ratio target of 1, set for 2022, is still far off *(Economic Survey-2021).*

The sub sector made limited progress with regard to enhancing inclusivity. A situational analysis on inclusive education practices in TVET institutions in Kenya established that trainees with disabilities in technical training formed less than 4% of the total students population. From the study, only 0.1%, 0.2% and 3.5% are trainees with disabilities in national polytechnics, technical institutes and vocational training centres, respectively *(KISE,2019).*

Table 42: ***Activities from TVET programme 2.1***

Programme	Planned in NESSP 2018-2022	Completion status
2.1: *Inclusive Training in TVET*	Conduct a gender, regional and special needs survey targeting potential TVET trainees	Conducted gender analysis in TVET, and situational analysis on inclusive training TVET
	Conduct a survey of TVET institutions to establish status of infrastructure friendly to Special Needs	A survey was conducted
	Equip TVET institutions with adapted assistive devices	Carried out in four special TVET institutions (Sikri, Nyang'oma, Machakos and Karen TVCs)
	Adapt TVET infrastructure to make it disability friendly and safe for trainees	Done in 16 institutions (KTTC, 11 National polytechnics and 4 SNE TTIs)

Limited activities from the Inclusive Training Programme have been carried out, and none of the activities related to the Talent Development and Mentorship Programme. However, the following were achieved: Gender and situational analysis on inclusive TVET were conducted; four special TVET institutions have been equipped with adapted assistive devices; and TVET infrastructure has been adapted to make it disability friendly and safe for trainees.

2.8.3 Policy priority 3: Improve Quality and Relevance of TVET Training in Kenya

Goal: Promote skills development for employability and self-sustainability
Target(s): Equip TVET trainees with relevant skills that are relevant to the world of work.
Programme 8.1: Competency Based Education and Training (CBET) Curriculum Development
Programme 8.2: Trainer Management Services
Programme 8.3: TVET Accreditation and Quality Assurance
Programme 8.4: TVET Research, Innovations, Technology Transfers, Entrepreneurship and Commercialization
Programme 8.5: ICT Integration in Curriculum Delivery and Assessment
Programme 8.6: Greening Technology in TVET

The output indicators related to improving quality and relevance of TVET training had steady and

positive growth over the review period. There has been an impressive increase of 1000 TVET trainers every year, from 2017-2020, meaning that the 2022 target of 8000 trainers is on course to being met. Likewise, an additional TVET centre of excellence has been built every year, in the review period, with a target of having a total of five centres by 2022 remaining on track. With regards to the number of TVCs equipped with IT equipment, there has been growth, albeit at a slow rate, number stood at 60 against a target of 150 equipped centres by 2022.

Table 43: ***Number of TVET Trainers, Centres of Excellence, and TVCs Equipped with ICT Equipment, 2017-2020***

	2017 Baseline	2018	2019	2020	2022 Target
TVET trainers	3000	4000	5000	6000	8000
TVET centres of excellence	N/A	1	2	3	5
TVCs equipped with IT equipment	10	20	40	60	150

Source: *Economic Survey 2020 and TVET MIS*.

As far as the planned activities within the five programmes under this policy priority are concerned, most progress was in the Competency Based Education and Training (CBET) Curriculum Development programme. The sub-sector planned to recruit adequate human resource for effective implementation of CBET and managed to recruit 3000 trainers. Furthermore, 97 Sector Skills Advisory Councils (SSACs) have been established through which 97 occupational standards have been developed. With regards to Development of Competency Based Education and Training curricula, 406 training curricular have been developed. The sub-sector has developed the CBET framework and guidelines to guide trainers in its implementation as follows: 1000 Curricula; 804 Learning Guide and Training Programs; 10 digital contents on CBET course and 12,131 Competency Based Assessments done. Moreover, a CBET Framework for Assessment and Certification has been developed. In addition to the mentioned, the following guidelines on competency-based assessment developed: Criteria for conducting competency-based assessment; Competence assessment and certification procedures; Examinations and competence assessment rules; and standards for competence assessment centres.

Table 44: ***Activities from TVET Programme 3.1***

Programme	Planned in NESSP 2018-2022	Completion status
3.1: Competency Based Education and Training (CBET) Curriculum Development	Recruit adequate human resource for effective implementation of CBET	3000 trainers recruited
	Establish Sector Skills Advisory Councils (SSACs)	97 SSACs established 69 sector skills advisory committees appointed
	Develop occupational standards through the SSACs	97 occupational standards developed

	Develop Competency Based Education and Training curricula	406 training curricula developed
	Develop CBET framework and guidelines to guide trainers in its implementation	CBET policy framework and guidelines developed
	Develop the capacity of trainers, both at pre-service and in-service, on CBET	1000 curricular developed 804 learning guide and training program developed 10 Digital contents developed 12,131Competency Based Assessments developed
	Develop a framework and guidelines for CBET assessment and certification	CBET Framework for assessment and certification developed
	Improve the system of evaluating institutional based projects and practical in TVET	The following guidelines on competency-based assessment developed: Criteria for conducting competency-based assessment Competence assessment and certification procedures Examinations and competence assessment rules Standards for competence assessment centres
	Enhance coordination of TVET at the County level	5 additional county directors of TVET deployed
	Recruit 7,260 trainers for the newly constructed TVCs	3000 trainers recruited

	Carry out a capacity assessment of KTTC's ability as a trainer for TVET trainers	Assessment done

Over the period under review, the sub-sector deployed 5 additional county directors, and recruited 3000 of the targeted 7,260 trainers for the newly constructed TVCs. A standard and guidelines for identification and recognition of centres of excellence were also developed and implemented. Furthermore, a draft ICT integration policy was developed, and 60 TVCs of the targeted 140 were provided with ICT equipment. In addition, capacity building of TVET managers and trainers for skills in ICT integration in training was carried out through training workshop. The trainers were also sensitized on the use of open educational resources and finally digital content for 10 CBET courses were developed.

Table 45: ***Activities from TVET Programmes 3.3, 3.4 and 3.5***

Programme	Planned in NESSP 2018-2022	Completion status
3.3: TVET Accreditation and Quality Assurance	Recruit adequate human resources for effective accreditation and quality assurance	Recruitment done
	Develop a TVET Management Information System	Is ongoing and the capacity institutions have been capacity built on the system
	Undertake a mapping of all TVCs and VTCs	Has been done to all public institutions
3.4: TVET Research, Innovations, Technology Transfers, Entrepreneurship and Commercialization	Support research and protection of Intellectual Property Rights (IPR) in TVET innovations	Research carried out through TVET fairs and Exhibitions
	Develop and implement a standard and guidelines for identification and recognition of centres of excellence	Standards and guidelines developed
	Establish 47 TVET centres of excellence in the 47 counties	3 centres of excellence established
3.5: ICT Integration in Curriculum Delivery and Assessment	Develop and implement an ICT integration policy in TVET	Draft ICT integration policy developed
	Provide ICT equipment to 220 TVCs and 470 VTCs	60 TVCs provided with ICT equipment
	Building capacity of TVET managers and trainers for skills in ICT integration in training	Carried out through training workshop

	Sensitize TVET trainers on the use of open educational resources	Trainers sensitized
	Digitize curriculum, management and assessment processes in TVET	Digital content for 10 CBET courses developed

2.8.4. Policy priority 4: Enhance governance and accountability in TVET

Goal: Strengthen governance and accountability in management of TVET
Target(s): Enhance management and governance capacity across TVET managers and leadership.
Programme 4.1: Improve TVET Industry Linkage
Programme 4.2: Strengthen Institutional and Inter-Governmental Linkages in TVET Programme 4.3: Public Institutional Management in TVET

The percentage of TVET institutions that have received training in financial management as greatly increased since 2018, with 70% of institutions having received some training by 2020. The 2022 target of 100% receiving some financial management training is likely to be achieved if this pace is sustained. Induction has been conducted for all appointed Board of Governors and Council members in public TVET institutions.

Table 46: ***Activities from TVET programmes 4.1, 4.2 and 4.3***

Programme	Planned in NESSP 2018-2022	Completion status
4.1: *Improve TVET Industry Linkage*	Conduct tracer studies in TVET	One tracer study initiated in 2020
4.2: Strengthen Institutional and Inter-Governmental Linkages in TVET	Develop a TVET inter-governmental relations framework	This is on-going
4.3: *Public Institutional Management in TVET*	Build capacity of managers in TVET institutions on governance, financial management and accountability	70% of the managers have had their capacity built on governance, financial management and accountability
	Induct the Board of Governors and Council members in public TVET institutions	Induction conducted for all appointed board and council members

Enabling Factors and Opportunities
A major factor which has facilitated improvements in the sub-sector has been the increased public spending on technical vocational education and training, which averaged 5.4 % of total education spending in 2019/20. The TVET budget, as a percentage of the total education budget increased substantially between 2017/18 (by 2.7 %) and 2019/20 (by 5.4 %). The resources were utilized in recruitment of training instructors, creation of new training institutes, ensuring that TVETA is certified, payment of capitation grants and assessing the development of the new curriculum.

The conducive legal and policy environment was another overarching enabling factor. The Technical and Vocational Education and Training Act No. 29 of 2013 provided the requisite legislation for the establishment of technical and vocational education and training system, governance, management of

the institutions, assessment, examination and certification. The Technical and Vocational Education and Training Authority (TVETA) was established under this Act, with a mandate to regulate and coordinate training in the country through licensing, registration and accreditation of programs, institutions and trainers. In 2018, TVETA unveiled its strategic plan for the period 2018 - 2022, which presents a renewed foundation towards achieving a modern and labour market responsive TVET system for Kenya. The TVET Funding Board, which is yet to be established, is to oversee disbursement of funds to TVET institutions, while the Curriculum Development, Assessment and Certification Council (CDACC) addresses issues on syllabuses for the training institutions; examination; assessment; and competence certification. The Executive Order No. 1 of 2018 (revised in2020) gives the mandates of the SAGAs (CDACC, KNQA, TVETA, KETRB.

The progress in implementing the reforms of Competency Based Educational Curriculum (CBC) and Competency Based Education and Training (CBET) are very important for improving the skills of the Kenyan youth. CBET is industry- and request-driven, results-based instruction. The CBC and CBET that have been implemented during the NESSP period, stress on the use of abilities and information to solve real life problems.

Challenges Faced during the Implementation

In the period 2017 to 2020, the sub sector faced a number of challenges that negatively impacted the performance. Inadequate budgetary allocation to the sub-sector meant that the available financial resources were not enough to recruit sufficient number of skilled trainers, purchase teaching materials or adequately equip the training institutions for effective delivery of TVET. Further, the sub-sector experienced overlaps of mandate among various TVET Agencies; and poor coordination between the multiple SAGAs and relevant ministries counties and departments which are responsible for the delivery of TVET.

There were inadequate strategies for assisting disadvantaged trainees. The flat-rate capitation, fees subsidies and HELB loans are far too inadequate in reaching the poorest youths. There is therefore, need to supplement these with targeted scholarships and other pro-poor strategies.

Insufficient special needs trainers in TVET and inadequate competencies within the existing trainers pose a challenge in achieving inclusion in TVETs. There is also a mismatch between TVET programmes and labour market needs. The underdeveloped capacities for research have resulted to limited labour market research being undertaken.

The sub-sector lacks occupational training standards and what is currently available, the Kenya National Occupational Classification Standards (KNOCS 2000), are based on international standard classification of occupations. Although the country has experienced substantial expansion in the TVET sector, there are gaps in quality of training offered and trainers require structured and regular up-skilling, in collaboration with industry.

Furthermore, there is a significant shortage in the TVET administrative staff in SAGAs, and trainers in TVET institutions. Resource mobilization and allocation has also been affected by weak governance. It is also worth noting that lack of qualified trainers, poor infrastructure and training equipment results in poor delivery of training curriculum.

Priority Interventions for the Remaining NESSP Period

They key priorities for the remaining NESSP period are organized in terms of short term, mid-term and long-term area priorities as tabulated in Annex 1.

2.9 UNIVERSITY SUB-SECTOR

2.9.1 Policy priority 1: Access to university education by all eligible students

Goal: Expand access and participation in higher education.
Target(s): Increase gross enrolment in university education from 15 to 25%.
Programme 1.1: Expand Infrastructure in All Public Universities.
Programme 1.2: Improve Retention, Safety, Well-being and Productivity of University Students.
Programme 1.3: Increase Access to SET Course Programmes.
Programme 1.4: Open, Distance and E-learning in University Education.

The first NESSP 2018-2022 policy priority of the university sub-sector focuses on expanding access and participation in higher education, through expanding infrastructure in public universities; improving retention and well-being of students; increasing access to SET course programmes; and expanding Open, Distance and E-learning.

Overall university enrolment has decreased during the plan period, from 547,316 students in 2017 and a GER of 5.3% to 540,876 in 2019 and a GER of 4.9%. The enrolment was 566,042 in 2020, a GER of 4.9%. Thus the 2022 targets are even further out of reach than at the beginning of the plan.

Table 47: ***University enrolment and Gross Enrolment Rate, 2017-2020***

	2017 Baseline	2018	2019	2020	2022 Target
Number of students enrolled	547,316	565,045	540,876	566,042	604,281
University GER	5.3%	5.3%	4.9%	4.9%	5.7%

Source: *CUE report.*

Many of the planned activities in these programmes are underway. An assessment of the status of infrastructure in public universities is yet to be initiated. A total of 101 capital projects were being implemented and of these, 36 had been completed and 64 were on-going at various levels of implementation. Nevertheless, upgrading of infrastructure in all new public universities was not achieved.

In order to enhance retention rates and completion rates, the plan catered for addressing factors affecting students' well-being, including developing and implementing a guidance and counselling programme for universities. In 2018, universities were advised to create offices of Career Guidance and Counselling. The Ministry developed a draft policy on Career Guidance and Counselling in November 2020 but is yet to be adopted. Key achievements under programmes 1.1 and 1.2 are as shown in Table 48.

Table 48: ***Activities from University programmes 1.1 and 1.2 (selected)***

Programme	Planned NESSP 2018-2022 Activity	Completion status
	Conduct an assessment of the status of infrastructure in public universities	The assessment is being planned

1.1 Expand Infrastructure in All Public Universities	Rationalize expansion of university education	A moratorium on expansion of universities issued in October 2016 continued to be enforced. 25 university campuses closed during the review period
	Upgrade infrastructure in all the new public universities	Construction of tuition blocks was on-going in six out of the seven constituent colleges
	Develop an incentive framework for private sector investment in university education	Guidelines to implement the Public-private partnership Act, 2013, in the universities were yet to be finalized
1.2: Improve Retention, Safety, Well-being and Productivity of University Students	Construct multi-purpose student accommodation and welfare facilities in all public universities	Construction of students' hostels was completed in Technical University of Mombasa, Kibabii as well as Garissa universities. In Moi, Chuka and Kisii universities the hostel projects were ongoing. A sports field project is on-going in Meru University of Science and Technology
	Develop and implement a guidance and counselling programme for universities	A draft policy on Career Guidance and Counselling developed in November 2020 is yet to be launched

To improve access to Science, Engineering, and Technology (SET) programmes, the sub-sector targeted to increase enrolment in SET related courses from 20% of total student enrolment to 60%. There is, however, no data available on this target, but some of the related activities are currently on-going. Under the Higher Education Science and Technology (HEST) project, a total of 348 post graduate students were trained on engineering and applied sciences. This target is behind schedule. Even though KUCCPS reviews university placement criteria yearly, they are not specifically placing students in SET programmes, as placement is based on students' choice, their qualifications and availability of spaces. All the same, development of criteria for placing students from alternative pathways to government sponsored programmes in universities is on-going. Table 48 present a summary of implementation of programmes 1.3 and 1.4.

Table 49: ***Activities from University Programmes 1.3 and 1.4***

Programme	Planned NESSP 2018-2022 Activity	Implementation status
1.3: Increase Access to SET	Review the university placement criteria to ensure that 60% of eligible students are placed in SET programmes	Review is conducted every year by KUCCPS

Course Programmes 1.4: Open, Distance and E-Learning in University Education	Develop criteria for placing students from alternative pathways to government sponsored programmes in universities	Consultations with various government agencies are being made to develop the criteria
	Establish the Open University of Kenya	The Ministry, in collaboration with the Open University of the United Kingdom, and in consultation with other partners, has plans to establish the proposed National Open University of Kenya
	Review the standards and guidelines for ODEL	The CUE published the guidelines for ODEL. Universities wishing to offer ODEL programmes have to seek approval for each programme
	Build capacity for university academic staff in ODEL	Individual universities have been conducting training for their academic staff
	Review funding policy to accommodate ODEL students, including student loans and bursaries	HELB has proposed to expand student financing to include laptop loans

Under this policy priority, the vision was to strengthen and expand Open Distance and E-Learning (ODEL) in all universities. Consequently, guidelines on ODEL have been published and implemented. As with the other programmes, there are many activities in this programme that were on-going, including developing digital content for university academic programmes, and the establishment of the Open University of Kenya. Individual universities had conducted training for their staff.

2.9.2 Policy Priority 2: Enhance Equity and Inclusion in University Education

Goal: Equal opportunity to university education for all eligible students
Target(s): Increase gender parity in University Education to from 0.71 to 0.9.
Programme 2.1: University Scholarship, Loans and Bursaries
Programme 2.2: Affirmative Action for Disadvantaged Groups

This policy priority targeted to improve gender parity to 0.9 and inclusion in university education. The target is behind track the female-to-male enrolment ratio in universities slightly improved from 0.71 in 2017 to 0.75 in 2018, before decreasing to 0.73 and 0.71 in 2019 and 2020 respectively. On improving inclusivity, a total of 3,312 students were placed to universities under the affirmative action: 1,042 under gender, 2,245 from marginalized areas, and 25 from PWDs.

The NESSP programme on provision of government scholarships to deserving university students, particularly those from disadvantaged backgrounds; students with special needs; and female students in SET, aimed at improving equity and inclusion. The initiatives within this programme had progressed at varying levels —a review of the differentiated unit cost criteria was on-going, while the government capitation to sponsored students had remained constant. For other activities, 21,941 students were awarded bursaries in 2018/19, while 19,947 students benefited in 2019/20.

HELB continued to provide preferential funding for students studying Science, Technology, Engineering, Mathematics, and Innovation (STEMI). Some 108 partial postgraduate scholarships

were also awarded to students drawn from the 47 counties. Nevertheless, scholarships to students with special needs was not realized, although individual universities continued to provide local scholarships. Achievement under programmes 2.2 and 2.3 is shown in Table 50.

Table 50: ***Activities from University programmes 2.1 and 2.2***

Programme	Planned NESSP 2018-2022 Activity	Implementation status
2.1: University Scholarship, Loans and Bursaries	Review the Differentiated Unit Cost (DUC) criteria to cater for students admitted under affirmative action and females in SET courses	Discussions on the review were underway
	Provide HELB loans to all students in all universities	In 2018/19, HELB granted loans to 304,660 students against 424,455 applications, while in 2019/20, 347,384 students were facilitated against 417,353 applications
	Increase capitation to government sponsored students	The capitation for government sponsored students was not increased
	Provide bursaries to students from disadvantaged socio-economic backgrounds	21,941 students were awarded bursaries in 2018/19, while 19,947 students benefited in 2019/20
	Provide scholarships to students undertaking studies in programmes related to the government's key priority areas	Scholarships were processed through DUE for students to study priority programmes in international universities
	Provide scholarships to students with special needs, placed in public universities.	Currently, local scholarships are administered by individual universities, which are awarded as per the policy in that particular university. The sub sector is yet to initiate its own scholarship programme for students with special needs who are placed in public universities
2.2: Affirmative Action for Disadvantaged Groups	Apply affirmative action in placement of students with disabilities and minority groups in university in programmes, where there is under representation	A total of 3,312students were placed in universities under affirmative action: 1,042 under gender, 2,245 from marginalized areas, and 25 from PWDs
	Develop a policy for SNE in public universities	The universities SNE policy is yet to be developed. However, some individual universities like Kenyatta University have an SNE policy
	Upgrade university facilities to accommodate students with special needs	To be initiated

	Build capacity of university staff in delivery of services to students with SNE	To be initiated

As far as affirmative action for disadvantaged groups is concerned, affirmative action was applied through the initiative of KUCCPS, by lowering the overall cut-off points for degree programmes for female applicants and minority and marginalized groups, and also lowering cut-off points of specific programmes in order to attain a certain percentage of representation (a third for either gender and 10% representation of minority and marginalized groups). Affirmative action for special needs students consisted of lowering the overall cut-off point for degree programme applicants with physical impairments, who had been registered with the National Council for Persons with Disabilities and certified by a medical doctor, subject to meeting the admission requirements for their degree choices. Other activities to support special needs university students had less progress. For instance, a policy for SNE in public universities had not been developed due to financial challenges and there still was a weak capacity of university staff to deliver services to students with SNE. Furthermore, upgrading university facilities to accommodate students with special needs and building the capacity of university staff for delivery of services to students with SNE were yet to be initiated.

2.9.3 Policy Priority 3: Enhance the Quality and Relevance of Training and Research in University Education

Goal: Provide adequate and competent academic staff in universities.
Target(s): Increase the gross staff student ratio in public universities from the current 1:36 to 1:29.
Programme 3.1: Human Resource Capacity Development for Public Universities.
Programme 3.2: Review of Curriculum and Programme Delivery in Universities.
Programme 3.3: Develop Infrastructure and Provide Training Equipment.
Programme 3.4: University Research and Community Service in Universities

Under the human resource capacity development programme, there was a notable increase in the total number of university academic staff during the review period, from 12,662 in 2017 to 20,489 in 2019, a 62% increment. Accordingly, the gross staff to student ratio in public universities has significantly improved, from 1:36 in the baseline year (2017) to 1:26 in 2019, already better than the 1:29 2022 target and hence the target has been achieved. There was also a slight improvement in the percentage of teaching staff with PhDs, which was 35% in 2019, three percentage points higher than 2017.

Table 51: ***Staff to student ratio in public universities, % of teaching staff with PhDs, and total academic staff, 2017-2019***

	2017	2018	2019	2022 Target
Gross staff to student ratio in public universities	1:36	1:30	1:26	1:29
% of teaching staff with PhDs	32%	37%	35%	
Total academic staff	12,662	16,572	20,489	

Source: *CUE report.*

In order to enhance the quality and relevance of training and research in university education, there were four planned programmes within NESSP 2018-2022, which focused on human capacity development; review of curriculum; infrastructure development; and expanding university research.

A human resource audit had been on-going in universities since 2020, and 8 out of 32 HR audit reports had been received. As for some of the other related human capacity development activities of this programme, the initiative to recruit 1,000 postgraduate students into the teaching assistants programme annually, has not been successful due to financial challenges. Four hundred and fifteen Masters and PhD staff were trained in engineering and applied sciences, courtesy of the HEST project, which closed in June 2021. However, the total number of students receiving scholarships was still low.

The research funding of 0.8 % in 2020/21, is below the required level of 2% of recurrent allocation of government funding. The summary of programmes 3.1, 3.2 and 3.3 are presented in Table 52.

Table 52: ***Activities from University programmes 3.1, 3.2 and 3.3 (selected)***

Programme	Planned NESSP 2018-2022 Activities	Completion status
3.1: Human Resource Capacity Development for Public Universities	Conduct a human resource audit in public universities	Universities have been conducting a human resource audit since 2020, and 8 (out of 32) HR audit reports had been received
	Provide 4000 Masters and PhD scholarships annually, targeting university academic staff	The HEST Project has funded the training of 415 University Teaching Staff at Master's and PhD level in engineering and applied sciences. Individual universities have been granting scholarships to their teaching staff, but this data has not yet been collected
	Recruit 1000 postgraduate students into the teaching assistants programme, annually	The individual university councils are given the mandate to recruit their staff. The students who do well at undergraduate and postgraduate levels are usually absorbed as part of the academic staff. However, due to financial challenges, the initiative has not been successful
	Allocate 2% of recurrent allocation of government funding to public universities for research by academic staff	The current funding is below target standing at 0.8%
	Develop national human resource management guidelines for university staff	While universities have individual human resource guidelines that are aligned to the Public Service Commission, the Salaries and Remuneration Commission, the State Corporations Advisory Committee, and the Ministry are yet to develop guidelines specifically for university education
	Build capacity of academic staff in pedagogy and modem delivery modes for international competitiveness	The sub sector is in the process of coming up with modalities on how to conduct training on pedagogy and modern

		delivery modes for international competitiveness
	Develop exchange programmes for academic staff	Attempts have been made to initiate exchange programmes for academic staff in universities. Currently, universities' councils organize programmes based on the MOUs that they have with various universities
	Provide adequate office space and facilities for academic staff to accommodate the growing number in public universities.	Awaiting assessment of the status of infrastructure in public universities
3.2: Review of Curriculum and Programme Delivery in Universities	Review all academic programmes	436 programmes were reviewed
	Conduct quality inspection audits	The CUE has conducted 19 quality audits since 2018
	Establish industry liaison committees in each university to conduct regular review of programmes offered in public universities	The committees have not been well developed in universities, although most programmes are done in liaison with specific industries
	Establish compulsory and funded attachment programme for all university students	This has become a challenge because there are fewer attachment opportunities than the number of university students
3.3: Develop Infrastructure and Provide Training Equipment	Identify and establish 5 centres of excellence in critical areas of the economy	Southern and Eastern African Higher Education Centres of Excellence have been established in three universities and have enrolled a total of 326 Masters and 121 PhD students
	Procure and supply equipment to universities offering SET programmes	The HEST Project that ended on 30thJune, 2021, funded the supply of Engineering and Applied Science Equipment to eight universities
	Establish Science and Technology Parks	The Centre for Science and Technology Park has been established at Dedan Kimathi University of Technology
	Establish the Kenya Advanced Institute for Science and Technology	The establishment of the Kenya Advanced Institute of Science and Technology (KAIST) is on-going and the project is being implemented by the Government of Kenya and South Korea. The contract for construction was signed on 21st April 2021 for the construction work to start

A review of university curriculum and programme delivery was planned, to ensure that this is aligned to national priority areas and the demands of industry. Four hundred and thirty-six academic

programmes have been reviewed, and the Commission for University Education (CUE) has carried out 19 quality audits since 2018. Whereas industry-liaison committees had not been well-developed, development of most academic programmes was nevertheless carried out in liaison with specific industries.

Several activities involving the development of infrastructure and training equipment (programme 3.3) had been completed. For instance, centres of excellence were established in three universities, enrolling a total of 326 Masters and 121 PhD students. The Centre for Science and Technology Park was established at Dedan Kimathi University of Technology. Furthermore, the HEST project funded the supply of engineering and applied science equipment to eight universities. In addition, the establishment of the Kenya Advanced Institute of Science and Technology was on-going.

In relation to activities under programme 4: the one on University Research and Community Service in universities had not been implemented. It was noted that universities had inadequate numbers of teaching staff, with serving lecturers spending 90% of their time teaching, while they ought to spend at least 30% of their time on research.

2.9.4 Policy priority 4: Strengthen governance and accountability in university education

Goal: Improve governance, management and accountability in universities.
Target(s): i. Enhance management and governance across universities.
Programme 4.1: Capacity Building of University Councils and Management.
Programme 4.2: Governance and Accountability in Universities.

This policy priority focuses on strengthening university governance and accountability by improving the capacity of university councils and management, and automating university processes. As part of capacity building efforts, 62 senior university management staff and university council members were trained in governance and strategic management, and a Project Management Unit was established, coordinated by the CPPMU. The establishment of automated processes, including an integrated financial management system and higher education management information system was underway, with some universities having established systems while others were in the process of establishing them. In addition, the setting up of the integrated payroll personnel database was on-going, although some universities had not prioritized investment in this activity.

Table 53: ***Activities from University programmes 4.1 and 4.2 (selected)***

Programme	Planned NESSP 2018-2022 Activities	Completion status
4.1: Capacity Building of University Councils and Management	Review the human resource management policies in public universities, including Codes of Conduct for personnel	To be initiated
	Develop and implement a training programme on corporate governance, targeting university council members.	62 senior university management staff and university council members were trained in governance and strategic management

	Establish a project implementation unit at the state department for university education	The Project Management Unit has been formed and is coordinated by CPPMU. At the Directorate of University Education, the units are active and are headed by Deputy Directors of Education
4.2: Governance and Accountability in Universities	Establish integrated financial management systems in all universities	Some universities have established IFMS while others are in the process of establishing them
	Establish higher education information management system	Some universities have established university level management information systems while others are in the process of establishing them
	Establish integrated payroll personnel database (IPPD) for all universities	This is an on-going activity, though not fully embraced by all the universities

Enabling Factors and Opportunities

A conducive legal framework was a major enabling factor for the implementation of the NESSP targets. The implementation of the universities Act, 2012 by the various actors facilitated coordination and clarity on matters university education. Further, availability of internet connectivity across public universities boosted access to university education through online learning. In addition, financial support from development partners strengthened STEM programmes through training and provision of equipment. The Emergence of COVID-19 and its impact on institutions of higher learning changed the mode of learning to online, increased demand for ODEL, and influenced attitude towards the programme.

Challenges

During the period under review, the university sub-sector experienced a number of challenges which hampered realization of the planned targets. The main challenge was failure to fully implement the DUC introduced in 2017 as a funding model for universities. Under this model, the government was expected to provide 80% of the DUC financial requirements, while the remaining was to be universities and the households. The government component remained below the target throughout the review period which exposed the universities to financial difficulties.

Challenges in implementing a Collective Bargaining Agreement (CBA) negotiated with the university unions and Salaries and Remuneration Commission covering the period 2017 to 2021 occasioned frequent labour unrests in universities. On student financing, allocation declined during the years resulting in low per student funding at Ksh. 37,000, which is inadequate to sustain them in the universities. In addition, the implementation of governance and accountability targets wasaffected by lack of buy in by the universities especially on the establishment of management information systems and the integrated payroll personnel database.

Expanding access to university education through ODEL was constrained by the high cost in acquiring the ICT infrastructure and equipment. The cost of internet remained beyond reach for most students while many of them lack computers/laptops to access online materials. Further, increasing access to SET academic programmes was not achieved due to inadequate qualified academic staff in universities, inadequate/obsolete equipment, and low demand by the students.

Priority Interventions for the Remaining NESSP Period
They key priorities for the remaining NESSP period are organized in terms of short term, mid-term and long-term area priorities as tabulated in Annex 1.

2.10 SCIENCE, TECHNOLOGY AND INNOVATION SUB-SECTOR

2.10.1 Policy priority 1: Quality and Relevance of Science, Technology and Innovation

Goal: Build and develop human resource capital in Science, Technology and Innovation
Target: To increase the number of research personnel by 5%
Programme 1.1: Develop Science, Technology and Innovation (ST&I) Human Resource Capacities
Programme 1.2: Strengthen Science, Technology, Engineering and Mathematics (STEM) in Education and Training

The target under this policy priority is **to increase the number of research personnel by 5%**. The progress of this indicator cannot currently be reported on because National R&D surveys are carried out biennially, and only one was carried out in 2018/19 for the 2017/18 reference year, the latter providing the baseline. The next survey, due in 2020/21, would have provided data for the 2019/20 reference year, to enable growth in the number of research personnel to be measured.

Table 54: ***Activities from ST&I Programmes 1.1 and 1.2***

Programme 1.1: Develop ST&I Human Resource Capacities	**Implementation status**
Develop a set of responsive indicators and conduct human resource requirement needs audit to address ST&I skill development	ST&I indicators have been developed. Human resource requirement needs audit not yet initiated.
Conduct National Skills Inventory and Audit for ST&I	Not yet initiated.
Train and support research personnel	NRF and DRST trained 234 lecturers and researchers from public universities, research institutions and national polytechnics. They were trained on enhancement of research skills in 2019/2020. NACOSTI also trained 286 researchers on research ethics, from September 2018 to June 2021. KeNIA trained 40 research personnel on Intellectual Property (IP) policy, commercialization and technology transfer, in 2020/2021. The National Biosafety Authority (NBA) trained 345 research personnel on biosafety compliance and clearing house, environmental risk and food safety assessments of Genetically Modified Organisms (GMOs) and, genome editing and emerging techniques.
Recruit 300 technical staff to strengthen the state agencies supporting ST&I.	NACOSTI recruited 9 technical staff. KeNIA recruited 1 technical staff. NBA recruited 6 technical staff.

Programme 1.2 Strengthen Science, Technology, Engineering and Mathematics (STEM) in Education and Training	Implementation status
Provide modern infrastructure and equipment in education and research institutions	A total of 20 infrastructure projects were funded by NRF during 2018/2019, worth KES. 916,255,664.
Establish centres of excellence that promote innovation and creativity in select learning institutions	Not yet initiated.
Develop and implement ST&I mentorship programme in all levels of education and training	STEM mentorship in schools in Kenya has been going on through NACOSTI, in partnership with UNESCO and other partners. In 2018 and 2019, 670 students were mentored from 64 schools in 12 counties. The programme was, however, disrupted by the COVID-19 pandemic.
Build the capacity of academic staff in institutions of higher learning in SET programmes	Not yet initiated.
Provide scholarships and bursaries for female learners and trainees pursuing SET programmes	Not yet initiated.
Conduct scientific fairs at all levels of education and training to encourage learners pursue ST&I	NACOSTI in collaboration with the Ministry and other public ST&I agencies held two National Science Weeks in 2018 and 2019. In 2020 and 2021, the Science Week was not held due to the COVID-19 pandemic.

10.2 Policy priority 2: Access to Science, Technology and Innovation

Goal: Enhance access to Science, Technology and Innovation, towards a knowledge-based economy
Target: Develop ST&I infrastructure to support programmes in priority areas
Programme 2.1: Develop Infrastructure and Provide State-of-the- Art Equipment to Support ST&I
Programme 2.2: Improve Intellectual Property Rights Regimes of Science, Technology and Innovation
Programme 2.3: Innovation, Technology Transfer and Commercialization

The target under this policy priority is to develop ST&I infrastructure to support programmes in priority areas. This, however, cannot be reported on as the baseline, annual targets and actual values for this indicator are not available. The ST&I Infrastructure Survey needs to be completed, for a baseline to be established.

Table 55: ***Activities from ST&I Programmes 2.1, 2.2 and 2.3***

Programme 2.1: Develop Infrastructure and Provide State -of-the-Art Equipment to Support ST&I	**Implementation status**
Conduct a survey to establish the status of ST&I infrastructure in the identified priority areas	The ST&I Infrastructure Survey of 2019/2020 by NRF and DRST, and its reporting, were interrupted before completion by the COVID-19 pandemic.
Develop and implement a framework for sharing R&D infrastructure amongst institutions	Not yet initiated.
Develop the National Physical Science Research Laboratory	In progress at Konza Technopolis. The design and reports for the three priority laboratories (Theoretical and Computational Science Lab, Material Science and Engineering Lab, and Mineralogy and Nanotechnology Lab), have been done; out of a total of 11 laboratories. These designs have been submitted to the relevant Kenyan authorities for approval.
Develop Science Parks	The first Science Park at Dedan Kimathi University of Technology (DeKUT) was launched in September 2020. It is now under construction. The second Science Park at Konza Technopolis has not yet been initiated.
Facilitate Integrated Technology Transfer Centres (ITTC) at county level	Not yet initiated.
Establish the Square Kilometre Array Project	Not yet initiated.
Programme 2.2: Improve Intellectual Property Rights Regimes of Science, Technology and Innovation	**Implementation status**
Establishing a reward scheme for authors of scientific publications and innovators	A reward scheme for authors of scientific publications not yet initiated. KeNIA runs the National Innovation Award to recognize and motivate innovators.
Sensitizing stakeholders on the importance of Intellectual Property Rights	NACOSTI partnered with the World Intellectual Property Organization (WIPO) in a survey on institutional intellectual property and research assessment in June 2021. KeNIA has conducted 9 training workshops for innovators on Intellectual Property (IP) and innovation.
Developing and implementing a Sector Intellectual Property Rights Policy	NACOSTI, in collaboration with the Kenya Wildlife Service (KWS), the National Environmental Management Authority (NEMA), the Kenya Intellectual Property Institute (KIPI) and the United Nations Development Programme (UNDP), developed and finalized the Intellectual Property Policy Guidelines for Academic and Research Institutions in Kenya, in February 2021.

Establishing technology transfer offices	Not yet initiated.
Programme 2.3: Innovation, Technology, Transfer and Commercialisation	**Implementation status**
Provide equipment support to existing incubators in universities and other ST&I institutions	Not yet initiated.
Identify innovation and create modality for commercialization	KeNIA has designed a programme of Innovation Champions in universities, who help identify innovation and create modalities for commercialization. KeNIA supported the commercialization of 38 innovations which include innovations in the Big 4 Agenda thematic areas.
Acquire, adopt, adapt and diffuse technology.	Not yet initiated.

10.3 Policy priority 3: Equity and Inclusivity in ST&I

Goal: Enhance equity and inclusion in Science, Technology & Innovation
Target: Increase the proportion of special interest groups and researchers to the national population
Programme 3.1: Promoting Equitable and Inclusive Participation in Science, Technology and Innovation

The target under this policy priority is to increase the proportion of special interest groups and researchers to the national population. Universities and research institutions are not well-distributed, regionally, to reach all special interest groups.

Table 56: ***Activities from ST&I Programme 3.1***

Programme 3.1 Planned NESSP 2018-2022 Activities	**Implementation status**
Develop a framework for identifying and recognizing outstanding women and girl scientists	Not yet initiated.
Special incentives scheme to attract researchers and innovators from marginalized areas	Not yet initiated.
Carry out regular gender-disaggregated monitoring and evaluation in the ST&I sub-sector	Not yet initiated.
Conduct gender assessment of policy actions, financial resources and gender-responsive budgeting	Not yet initiated.
Map and engage outstanding women scientists	Not yet initiated.

Implement STEM mentorship programme for girls at all levels of education and training	NACOSTI initiated a National STEM Mentorship Programme for girls in secondary schools, and additionally inaugurated the Young Scientists Kenya (YSK) initiative that includes both girls and boys (see Box 1 for more details on these programmes)

Box 1: *Youth STEM Programmes*

The NACOSTI Youth STEM programme has grown to include: 2 Scientific Camps, the annual Africa Engineering Week, and the International Day for Women and Girls in Science.

In 2018 and 2019, the STEM Mentorship Programme for Secondary School Girls saw increased participation from 128 to 542 students getting involved in national scientific camps. For effective monitoring and evaluation (M&E) of the mentored students, an online tracking system was developed.

YSK promotes innovation across three pillars: STEM Outreach and Mentorship, the National Science and Technology Competition, and the Winners Boot camp. YSK's pilot programme in 2018 reached a total of 10,000 secondary school students from 10 counties and 82 schools. In 2019 (scale-up phase), YSK reached 45,000 students from 333 schools in 47 counties. In 2020, due to the COVID-19 pandemic, YSK reached students virtually from July to November. A total of 30,000 students from 175 schools in 30 counties were mentored. A DigiGirlz Panel Discussion and Boot camp were also held in March 2021, and a workshop on enhancing STEM education through robotics and Artificial Intelligence (AI) was also held in April 2021.

10.4 Policy priority 4: Governance and Accountability for Science, Technology and Innovation

Goal: A coherent legal, institutional and regulatory framework to support the growth, development, utilization and coordination of ST&I.
Target: Enhance governance and management of the ST&I sub-sector
Programme 4.1: Strengthen Governance and Accountability for ST&I.

The target under this policy priority is to enhance governance and management of the ST&I sub-sector. It entails strengthening governance and accountability for ST&I. The governance system for ST&I consists of these key institutions: The Ministry in charge of Science, Technology and Innovation; the National Commission for Science, Technology and Innovation (NACOSTI); the Kenya National Innovation Agency (KeNIA) and the National Research Fund (NRF).

Table 57: *Activities from ST&I Programme 4.1*

Programme 4.1 Planned NESSP 2018-2022 Activities	Implementation status
Review and harmonize the existing legal and regulatory framework	Not yet initiated.
Establish a National ST&I Observatory	This is on-going. The National ST&I Observatory system was designed and Terms of Reference (TORs) for infrastructure development developed.

Update and maintain the ST&I Observatory	The National ST&I Observatory is not yet in place.
Establish an Integrated Knowledge Management Information System to inform the country on the ST&I profile	Not yet initiated.
Conduct regular and scheduled R&D and Innovation surveys	The latest National R&D Indicators Survey was conducted in 2018/2019, however, this survey has not yet been scheduled to occur biennially. In 2020/2021, KeNIA conducted two national innovation surveys and has scheduled annual innovation surveys.
Publish biennial ST&I indices reports	Not yet initiated.
Develop a framework for resource mobilization for ST&I	NACOSTI has developed a draft resource mobilization strategy. NRF has developed a draft resource mobilization and investment strategy. DRST has developed a draft framework for establishing collaborations, partnerships and linkages in higher education, research, science, technology and innovation through memorandums of understanding/agreement.
Develop an incentive framework for private sector investment in R&D	In 2020/2021, the State Department for University Education and Research (SDUE&R) facilitated the formation of a National Academia-Industry Linkages Committee.

10.5 Enabling factors and Opportunities for the achievement of objectives

The opportunities that have been identified in the ST&I sub-sector during the NESSP implementation, include:

i. The implementation of the Government's Big 4 Agenda (2017-2022), for fast-tracking of Kenya Vision 2030, enabled the development and publication of the National Research Priorities (2018-2022).

ii. The availability of development partners willing to commit resources and expertise to support specific programmes, e.g., gender-mainstreaming in ST&I, etc.

iii. The growing profile of STEM in the unfolding 4th Industrial Revolution, which is creating more demand for SET skills and more jobs in ST&I careers.

iv. The increased uptake and use of digital technologies as a result of the COVID-19 pandemic enabled continuity of Research, Science, Technology and Innovation (RST&I) activities in public and private ST&I institutions.

10.6. Challenges faced in implementing NESSP activities

During the implementation of the NESSP, a number of challenges were encountered. First, the baseline data was inadequate which implied that it was not possible to set the annual targets for the outcome indicators. Second, failure to allocate all the NESSP targets to appropriate agencies and the continual reduction of the funds from the exchequer made it difficult for some activities to be initiated and/or completed on time. e.g. the annual budget of the National Research Fund (NRF) was cut from over KES. 1.6 billion in 2017/2018 to KES. 323 million in 2020/2021. In addition, NRF has not disbursed research grants for postgraduate training since 2018/2019. Third, there was

lack of a streamlined approach to planning, implementation, monitoring and reporting for the NESSP activities, and lack of a proper coordination mechanism for ST&I across government ministries, departments and agencies. Fourth, failure to implement the planned activities for women and girls researchers, meant little contribution towards gender mainstreaming in ST&I institutions. Fifth, the delayed institutionalization of the relevant national ST&I indicators surveys, means required evidence for policy making is missing. Lastly, several indicators were disrupted by the COVID-19 pandemic and have not resumed to date.

Priority Interventions for the remaining NESSP Period

The key priorities for the remaining NESSP period are organized as short-term, mid-term and long-term activities and tabulated in Annex I.

2.11 Post-Training and Skills Development

2.11.1 Policy priority 1: Improve quality and Relevance of Post-Training and Skills Development

Goal: To establish a formal linkage among Government, Industry and Academia
Target: To develop and institutionalize effective labour market placement systems that links training to industry.
Programme 1.1: Work Place Readiness Services
Programme 1.2: Work-Based Learning Services
Programme 1.3: Post Training Information Management

The core mandate of the State Department for Post-Training and Skills Development (PTSD) is to provide an institutional framework to devise and implement national, sectoral and workplace strategies to develop and improve the skills of the Kenyan workforce. In line with this role, one of the main outcomes sought for the PTSD sub-sector in the NESSP 2018-2022, is the development of policy and operational frameworks for work-based learning, labour market placement, and other systems linking training to industry. There are currently many policy and frameworks in the process of being developed, and this outcome is on track to being achieved. For example, the National Skills Development Policy is approximately 80% complete. A Stakeholder Validation Workshop was held in January 2021, and a Cabinet Memo has been prepared. The National Skills Development Policy is pending approval from the Cabinet, after which it will be launched and disseminated. In addition, other frameworks developed include, Guidelines for the Office of Career Services Regulatory Framework, as well as the National Apprenticeship and Entrepreneurship Guidelines.

The Department has also developed a Draft National Skills Development Bill. The Bill will provide for the establishment of the National Skills Development Council, Sector Skills Councils, National Skills Occupational Standards, and the National Skills Development Fund. In addition, 50 Offices of Career Services (21 in universities and 29 in TVET) have been established so far.

The Department has equally developed the National-County Collaborative Framework for Work-Based Learning. In this regard, 4 County WBL committees were established, out of a target of 10. The department also plans to establish an automated national skills inventory. This activity is currently at approximately 10% completion. A survey tool has been developed for mapping the industry players and 36 local industries have been mapped and are ready to train youth.

Overall, as can be seen in Table 54, there are many initiatives underway related to PTSD quality and relevance, indicating progress towards this NESSP 2018-2022 PTSD policy priority. Nevertheless, there is still work to be done in order to complete planned activities by 2022.

Table 58: ***Status of outputs related to quality and relevance of post-training and development***

Output	Implementation status
Policies/Frameworks	
National Skills Development Policy	80% done, submission to Cabinet pending
National Framework for Workplace Learning	Roadmap on the Joint Programme on Bridging the Skills Gap through Workplace Learning Programmes developed.
Office of Career Services Regulatory Framework	Guidelines and an M&E Framework for the OCS developed.
National Apprenticeship Guidelines	Guidelines developed.
Programmes/Partnerships	
Industry-training linkages	2 conferences held.
Partnerships and Collaborations	The department piloted a traineeship programme with 300 youths being trained and employed as sewing machine operators at Mega Couture-EPZ, Kilifi. The programme has since been rolled out to 47 counties, targeting 5,000 youth.
Apprenticeship Programme	Planned to train 80 youths but funds withdrawn.
Entrepreneurship Programme	Planned to train 100 youths but there were no funds.
Committees/councils	
Work-Based Learning (WBL) Committees	4 County WBL Committees established in Busia, Kilifi, Kitui and Garissa.
Office of Career Services (OCS)	50 OCS established: 21 in universities and 29 in TVET

Sources: PTSD Strategic Plan 2019-2024, Programme Performance Review 2017/18-2019/2020.

2.11.2 Policy Priority 2: Enhance Governance in the Post-Training and Skills Development Function

Goal: To enhance governance in the post-training and skills development function
Target (s): To establish and operationalize a governance structure for the post-training and skills development function
Programme 2.1: Enhance Governance and Accountability
Programme 2.2: Development of Skills and Employment Database

The second major policy objective for the PTSD sub-sector is to enhance the sub-sector's strategy, build capacity, and develop an integrated skills and management information system. It is expected to be operational by 2022, and is therefore on track to being completed at the end of NESSP 2018-2022 implementation period.

The development of the Integrated National Skills Management Information System (NSMIS) is underway, as guidelines and terms of reference for the consultancy were developed, and Egerton University was contracted to develop the technical specifications for it. While promising progress, given the trend, the target of completely developing the NSMIS may not be achieved before the end of 2022 due to lengthy procurement processes.

Enabling factors

The State Department for Post-Training and Skills Management draws its mandate from the Executive Order No. 1 of 2018 (revised in 2020). In addition, institutions like Egerton, Kenyatta, and Moi Universities are ready to train service providers. Other national and international bodies willing to link and collaborate with PTSD are KNFJKA, NITA, ILO and the Ministry of Interior and Coordination of the National Government among others. There are also many national and international partners willing to collaborate to enhance the quality and relevance of post-training and skills development.

The on-going restructuring in MoE, to address the educational dictates and labour market needs and goodwill from stakeholders willing to partner and collaborate, sets a conducive environment for enhancing governance and accountability. Furthermore, improved ICT connectivity will enhance service delivery and data and information sharing for evidence-based planning.

Challenges:

i. Low budgetary allocation has slowed the realization of some outputs.
ii. No National Career Guidance and Counselling Policy in place, to guide establishment of OCSs in institutions.
iii. There is lack of skills coordination and implementation of occupational standards, as there are no National Skills Council and Sector Specific Councils policies.
iv. There is a mismatch between skills development programmes and labour market needs as well as weak linkages between research, industry and skills development.

v. The lack of data and information on the skills needs; labour market information system; and tracer studies and other research findings hamper the evidence-based policy making, which is required for the growth of the PTSD system.

vi. Inadequate staffing and shortage of office space and equipment. The current number of technical staff which is four (4), is inadequate for the expected work output. In addition, most senior staff have offices in scattered areas and these offices have insufficient equipment for the required operations thereby affecting work output.

Priority Interventions for the Remaining NESSP Period

They key priorities for the remaining NESSP period are listed as short-term, mid-term and long-term priorities and tabulated in Annex I.

2.12 QUALITY ASSURANCE AND STANDARDS

2.12.1 Policy priority 1: Align education quality assurance and standards to Competency-Based Curriculum (CBC) and Competency-Based Assessment (CBA)

Goal: Align education quality assurance and standards to CBC and CBA.
Target (s): Education quality assurance and standards aligned to CBC and CBA by 2021.
Programme 1.1: Review and align Quality Assurance and Standards to Competency Based Education

The Ministry has continued to offer quality assurance across the three levels of curriculum management: curriculum development; curriculum implementation; and curriculum evaluation. This is done through development of standards; assessment of the standards; quality assurance in all basic education institutions programs; chairing subject panels in curriculum development and curriculum assessment; training of teachers and officers on curriculum implementation. Additionally, the Ministry ensures implementation and adherence to relevant policies and guidelines in basic education institutions.

During the period under review, the Ministry carried out a survey on the status of quality in the country, which informed the development of the National Quality Assurance and Standards Framework (NEQASF), a planned activity in this programme. This was developed up to 50% in the year 2017/2018, and fully completed in 2018/2019. The framework establishes improved structures for assessment, reporting and disseminating quality assurance information to relevant education stakeholders.

Capacity building was carried out by training 400 QASOs in the year 2018/2019, on CBC implementation. This aimed at enhancing the capacity of QASOs in monitoring CBC implementation in schools. Training of all quality assurance officers on NEQASF was scheduled to take place in 2019/2020 but it was hampered by the COVID-19 pandemic restriction. However, in 2020/2021 500 QASOs were trained on NEQASF for on-site school support to teachers. This implies that by the end of 2020/2021, all QASOs (100%) were trained on CBC implementation and NEQASF.

2.12.2 Policy priority 2: Assure quality and maintain standards in basic education learning institutions

Goal: Enhance quality and maintenance of standards in institutions of basic education.
Target: Increase coverage of institutions of learning in quality assurance and maintenance of standards from 30% to 70%.
Programme 2.1: Mainstream Quality Assurance at School/Institutional Level.

The Ministry's introduction of decentralized quality assurance at the institution/school level, Institutional Based Quality Assurance (IBQA), was a major paradigm shift to enhance efficiency and effectiveness of quality assurance processes. The concept of IBQA was embedded in the National Education Quality Assurance and Standards Framework (NEQASF) and therefore, the training of education managers on IBQA, which had been proposed in the plan, was rescheduled to be done later when the Ministry would be implementing and rolling out the NEQASF. The IBQA manual will be developed, automated, disseminated, and stakeholders will be trained in 2021/2022. This willimprove efficiency and effectiveness of the quality assurance process.

Once the IBQA is automated, the Ministry will be able to get real time data on education quality from all schools and increase quality assurance of institutions from an average of 30% to 70% and above. This will inform policy decisions and the timely interventions in schools that report low quality index.

As far as other achievements in quality assurance at school level are concerned, during the period under review, 8,000 schools were assessed in 2017/2018, 10,096 schools in 2018/2019 and 5,000 in 2019/2020. In the year 2020/2021, due to COVID- 19 pandemic, a total of 18,119 institutions were assessed and this included 6442 on risk assessment and 11,677 on institution readiness to re-open. In addition, the Ministry assured the quality of teaching practices of teachers in ECDE, PTE, TACE, SNE and DTE (see Table 59). Quality assurance officers also monitored the implementation of co-curricular activities every year since 2017/2018, except in 2020/2021 as there were no co-curricular activities due to COVID-19.

Table 59: ***Number of schools assessed, co-curricular activities monitored and number of teachers assessed for teaching practice during FY 2017/2018 to FY 2020/2021 period***

	FY 2017/2018 Baseline	FY 2018/2019	FY 2019/2020	FY 2020/2021
Number of schools assessed	8,000	10,096	5,000	18,119
Number of teachers assessed for teaching practices	3,518	6,870	4,545	6,434

Source: *MoE, DQAS, 2021*

Enabling factors and opportunities that influenced implementation of quality assurance and standards interventions

1. Good will from the government
2. Funding from the PRIED project enabled the Directorate to develop NEQASF and train QASOs on NEQASF
3. Support from the TUSOME programme assisted in digitizing the assessment tool.

Challenges faced in NESSP implementation

1. Inadequate enforcement of compliance and maintenance of education standards.
2. Failure to act on standard assessment reports by relevant consumers of the QAS reports.
3. Inadequate facilitation in terms of staff, transport and finances.
4. Lack of budgetary allocation for field quality assurance officers to maintain education standards.

Priorities for the remaining NESSP implementation period

Based on the status of the implementation of NESSP, the directorate will focus on the completion of priorities as indicated in NESSP 2018-2022. Consequently, new strategies will be employed to fast-

rack the achievements of the expected learning outcomes. The prioritized and categorized interventions are shown in Table 30.

2.13 KENYA NATIONAL QUALIFICATIONS FRAMEWORK (KNQF)

The KNQF is a learning outcome-based qualifications framework, comprising of all educational and training sectors and all forms of learning; formal, non-formal and informal learning. The KNQF comprises of levels, each being identified by a unique set of Level Descriptors. In order to place a qualification on any KNQF level, the learning outcomes (L.O) of each unit comprising a qualification and the overall qualification learning outcomes are mapped against these Level Descriptors. At each level, the Level Descriptors are classified into three separate strands (categories) covering Knowledge, Skills and Competencies. These policy priorities focused on mainstreaming articulation of KNQF by enhancing access to and equity in education, quality and relevance of qualifications, evidence-based competence, and flexibility of access to and affordability of education, training assessment and qualifications.

2.13.1 Policy priority 1: Access to Education and Training Qualifications

Goal: Enhance access to education and training qualifications Target(s): Access to education and training qualifications enhanced Programme 1.1 Articulation of KNQF

During the NESSP period, the following were targets that will enhance access to education and training qualifications in Kenya: develop two (2) policies on Credit Accumulations and Transfer System (CATS) and Recognition of Prior Learning (RPL), Sensitise stakeholders on KNQF and establish and maintain (1) Career Advice Service Centre.

As of FY 2021/2021, the following are achievements on access to education and training qualifications; Recognition of Prior Learning and Credit Accumulations and Transfer System Policies developed - ahead of track, 46 out of 80 educations stakeholder were sensitized on KNQF - on track and Career advice service is off track due to budget constraints.

2.13.2 Policy priority 2: National regulatory assurance system for national qualifications

Goal: To assure quality and credibility of national qualifications Target(s): To improve quality and credibility of national qualifications. Programme 2.1: Quality assurance of national qualifications in education and training

During the NESSP period, a total of five (5) qualifications were to be developed to steer quality assurance of national qualifications in education and training.

As of FY 2021/2022, Three (3) policies were achieved (60%) -on track and the remaining will be achieved in the remaining NESSP period. The following are Policies, Standards and Guidelines developed and its implementation is on course: Registration of Qualifications and Part-qualifications Standards, Standards for Accreditation process of Qualifications Awarding Institutions offering National and Part Qualifications, and National Standards for Assessment of National qualifications. The remaining two policies will be developed in the next NESSP period.

Enabling factors that influenced the implementation of KNQF activities

KNQA has a clear niche within the Kenyan qualification sector and an enabling framework as articulated in the KNQF Act of 2014 and the KNQF Regulations of 2018. Enabling factors that influenced the implementation of KNQF includes: Good support from the government, involvement of industry and development partners, ICT integration in KNQA Activities; development of National Qualifications Information System(NAQIMS: https://naqims.knqa.go.ke//) for registering qualifications, Accrediting Qualifications Awarding Institutions and Registering qualifications, and services and KENREV Portal (https://rev.knqa.go.ke/) used for Recognition, Equation and Verification(REV) of National and Foreign qualifications, Benchmarking with National Qualifications Authority Globally enhances access to education and training and subsequently the need to assure the quality of the qualifications.

Challenges faced in NESSP implementation of planned activities

During implementation, KNQA was faced with the following challenges; Inadequate budgetary allocation for most of the planned priority programmes has slowed realization of some of the planned activities, Lack of requisite policies to support implementation of the National Qualifications Framework since the Authority is relatively new in the Country, Lack of skills coordination and implementation of occupational standards as there are no National Skills Council and Sector-Specific Councils Policy, lack of adequate research and accurate data to inform policy on Qualifications Framework, Low publicity and awareness of the role of KNQF and KNQA in the country and overlapping of mandates between Agencies.

Priorities for the implementation of NESSP during the Period 2020/2021 to 2024/2025

Based on the status of the implementation of NESSP, the sector will focus on the completion of priorities as indicated in NESSP 2018-2022. Consequently, new strategies will be employed to Fast-rack the achievements of the expected learning outcomes. The prioritized and categorized interventions are shown in Annex 1.

2.14 CROSS-CUTTING AND CONTEMPORARY ISSUES

2.14.1 Policy priority 1: Mainstreaming cross cutting and contemporary issues and value systems in education and training

Goal: To integrate contemporary issues and values in the education and training sector.

Target: To promote knowledge and appreciation of contemporary issues and values in the education and training sector.

Programme 1.1: Reduce Violence, Radicalization, Extremism, Drug and Substance Abuse.

Programme 1.2: Mainstream Gender Issues in Education and Training at all Levels.

Programme 1.3: Promote Education in Emergencies.

Programme 1.4: Prevent HIV and AIDS Infections.

Programme 1.5: Promote Education for Sustainable Development (ESD).

Programme 1.6: Enhancing Mentorship, Moulding and Nurturing of National Values.

Programme 1.1 within the cross-cutting and contemporary issues focuses on reducing violence, radicalization, extremism and, drug and substance abuse. One of the planned activities was integrating themes related to these issues, as well as peace education, integrity and global education, into the

curriculum, with a target of integrating the themes completely by 2022. In 2019, MoE in collaboration with KICD developed a Manual for the integration of personal safety skills, self-defence, demonstrations on security drills, first aid, detection and response to weapons, and evacuation procedures for curriculum development. Psychosocial skills and services to students were also to be incorporated in the curriculum. Related Guidelines and Teacher's Handbooks were developed during the period under review as detailed in Table 60.

Table 60: ***Activities related to the integration of global citizenship into the curriculum***

Manual for the integration of Global Citizenship Education (GCED) to the curriculum developed.
Formation of TWG on Value-based Education (VBE) to spearhead integration.
Situational analysis on integration of VBE in the curriculum conducted.
Draft guidelines to integrate GCED to the curriculum developed.
Draft Teacher's Handbook on the integration of Citizenship Education (CE) to the curriculum developed.
Draft Teacher's Training Manual on integration of Citizenship Education to the curriculum developed
Essays and debates with peace themes, run by NCIC annually, in coordination with MoE.

Many of the other planned activities in this programme have also been completed. They include: Guidelines on prevention and management of drugs and substance abuse in basic education schools, a Mentorship Policy and the Child Safety & Security Against Violent Extremism Manual, which guides in the detection, prevention and response of behaviour that leads to radicalization into violent extremism, gender-based violence, and the use and abuse of drugs in basic education. Additionally, several trainings were conducted to build the capacity of teachers, officers and relevant stakeholders on issues such as on-site early detection, surveillance of learner behaviour and, conflict prevention and management as shown in Table 61.

Table 61: ***Activities from 'Cross-Cutting and Contemporary Issues' Programme 1.1 (selected)***

Programme	Planned NESSP 2018-2022 Activities (selected)	Implementation status
1.1: Reduce Violence, Radicalization, Extremism and Drug and Substance Abuse	Develop a framework on awareness creation and redress mechanisms on learner violence radicalization, extremism and drug and substance abuse	Guidelines on prevention and management of drugs and substance use in basic education institutions published. Guidelines and materials for learners on life skills and values education published. Child safety & security against violent extremism Manual published.

	Build capacity of learners, teachers and trainers, institution administrators, education officers, BOMs and parents on on-site early detection and surveillance of learner behaviour and conflict prevention and management	MoE collaborating with National Counter Terrorism Centre (NCTC) sensitized MoE officers, Community and Religious Leaders on on-site early detection and surveillance of learner behaviour, conflict prevention and management - Training conducted in 2019.
	Undertake research on emerging forms of school violence, radicalism, extremism, drug abuse and associated redress mechanisms	Situational Analysis conducted by MoE and NCIC on the emerging forms of school violence, radicalism, extremism and drug abuse which led into the reviewed Amani Club Guidelines and establishment of Amani Clubs in learning institutions.
	Develop protection systems including counselling and supportive referrals that respond to the mental health and psychosocial needs of learners	Mentorship Policy developed and launched in February 2019. Mentorship Facilitators Manual developed to be used for training.
	Develop a Manual on child safety and security against radicalization and violent extremism for institutions of basic education and training	In 2020, the Child Safety & Security against Violent Extremism Manual was developed and issued.

Table 62: ***Capacity building activities on on-site early detection and surveillance of learner behaviour and, conflict prevention and management***

In 2018, a training programme on Peace Building in Teacher Training Colleges was organized by the International Institute for Capacity Building in Africa (IICBA). The main objective of the training was to enhance the capacity of secondary school teachers and college tutors for delivery of Peace Education at the classroom, out of class and at community level. The training was cascaded to three Diploma Teacher Training Colleges (Kibabii, Lugari, and Kakuma) and the surrounding schools. Peace Clubs were organized in all counties by the National Cohesion & Integration Commission (NCIC) and MoE in Tana River, Isiolo and Nakuru. NCIC & MoE sensitized MoE officers, BOM and parents on Amani/ Peace Clubs, covering themes on conflict prevention and resolution. Amani Clubs were revised to integrate issues of Prevention of Violent Extremism (PVE) MoE, collaborating with the National Counter Terrorism Centre (NCTC), sensitized MoE officers, and Community and Religious Leaders on on-site early detection and surveillance of learner behaviour, and conflict prevention and management.

Programme 1.2 on mainstreaming gender issues in education and training sought to address the specific challenges that female students in Kenya face such as teenage pregnancy, early marriage, traditional practices that favour boys' education and gender-based division of labour. In Table 57, many of the activities in this programme have been achieved. Regarding the development of a strategy to prevent teenage pregnancy, National Guidelines for re-entry to schools were issued in 2020 and there is also a Draft National Action Plan for addressing Adolescent Health and Teenage Pregnancy which is under development. Guidelines on gender-based violence have also been developed along with teacher training modules. Amani Life Skills Clubs were launched in every county in 2019, and in 2020, there was an extensive community awareness and sensitization campaign for education officers, gender champions, chiefs and quality assurance officers. Lastly, in 2019/20, 9,000 bursaries were awarded targeting girls in the most vulnerable communities.

Table 63: ***Activities from 'Cross-Cutting and Contemporary Issues' Programme 1.2 (selected)***

Programme	Planned NESSP 2018-2022 Activities	Implementation status
1.2: Mainstream Gender Issues in Education and Training at all Levels	Develop a strategy to prevent teenage pregnancy	In 2020, the National Guidelines for Re-entry to Schools was developed and issued. Implementation of the re-entry guidelines is on-going. An online messages platform on protection against teenage pregnancy was also developed and shared in 2020.

		Additionally, a Draft National Action Plan for addressing
		Adolescent Health and Teenage Pregnancy in Kenya is being developed in collaboration with the National Council for Population and Development, the Ministry of Health and UNESCO.
	Establish clubs to promote life skills programmes among girls, especially in day schools	In 2019, NCIC in collaboration with MoE launched Amani Clubs in every county and appointed a coordinator in each county for monitoring and reporting on activities.
	Undertake community awareness and sensitization on the importance of girl child education	In 2019, a baseline survey was conducted in 110 sub-counties in 30 counties under SEQIP Project and a report published. In 2020, 221 education field officers, 6,658 gender champions, 224 chiefs, and 165 quality assurance officers were sensitized.
	Provide bursaries to girls from most vulnerable communities	In the 2019/2020 financial year, 9,000 bursaries through the SEQIP Project were awarded targeting girls from the most vulnerable communities.
	Develop guidelines on gender-based violence.	Guidelines on Gender-based Violence were developed and teachers training modules were also developed. Community dialogues on gender-based violence were conducted and are on-going.

The status of several activities from some of the other cross-cutting and contemporary programmes, such as promoting education in emergencies, education for sustainable development and enhancing mentorship, can be found in Table 58. Some of the accomplished activities include the development of a Basic Education Emergency Response Plan in 2020, the development of an ESD Action Plan in 2018, capacity development of education managers and other stakeholders on ESD in 2018, monitoring of ESD implementation and the development of a Manual for integrity clubs.

Table 64: ***Activities from 'Cross-Cutting and Contemporary Issues' Programmes 1.3, 1.4, 1.5 and 1.6 (selected)***

Programme	Planned NESSP 2018-2022	Implementation status
	Activities	
1.3: Promote Education in Emergencies	Develop ESD Action Plan	ESD Action Plan developed.
	Develop a strategy on safety-preparedness and response	In 2020, the Kenya Basic Education Emergency Response Plan was developed and issued, containing interventions for safety-preparedness and response.
	Build capacity of education managers and stakeholders on integration of ESD and climate change to all learning institutions	500 education managers had their capacity built.
	Conduct awareness campaigns on ESD for learners and school communities	Awareness campaigns were conducted on climate change and ESD.
	Monitor and evaluate ESD policy implementation in learning institutions.	Monitoring and evaluation conducted and report generated.
1.4. Prevent HIV and AIDS Infections	Disseminate the revised education sector policy on HIV and AIDS (2014)	No information.
	Develop a module in NEMIS to collect data related to HIV and AIDS	Data collected and draft module developed.
	Sensitize learners, teachers and the school community on HIV and AIDS prevention, treatment, care and management	No information.
	Develop a framework for a health and wellness programme	Teachers Service Commission has implemented a health and wellness workplace policy to address issues related to HIV and AIDS as well as drug and substance abuse among staff.

	Build the capacity of education personnel to deal with stigmatization and discrimination of learners living with HIV and AIDS	No information.
1.5: Promote Education for	Develop ESD Action Plan	ESD Action Plan was developed in March 2018 and disseminated to Regional Directors of Education

Sustainable Development		and County ESD Focal Persons in August 2018.
	Build capacity of education managers and stakeholders on integration of ESD and climate change to all learning institutions	Education Managers and other stakeholders were trained on ESD 2018 and Guidelines on integrating Climate Change in to the Curriculum developed in collaboration with the Ministry of Environment and Forestry.
	Monitor and evaluate ESD Policy implementation in learning institutions	Monitoring of ESD implementation in the ESD model centres in Nairobi and Kiambu in 2019 done.
1.6: Enhancing Mentorship, Moulding and Nurturing of National Values	Establish integrity clubs in all institutions of learning	In 2018, the Ethics and Anti-Corruption Commission, in collaboration with the Ministry of Education and KICD, developed and issued Manuals for the establishment of Integrity Clubs in all learning institutions. In 2019,the EACC, together with MoE and KICD, developed a simplified digital version of the Integrity Club Manual for the establishment of integrity clubs in institutions of basic education in Kenya. The Digital Integrity Club Manual is awaiting approval for implementation.

Programmes 1.3, 1.4, 1.5 and 1.6 sought to integrate and promote knowledge and appreciation of contemporary issues and values in the education and training sector. Based on the performance analysis, Guidelines and Manuals were successfully developed to guide integration of learning of pertinent and contemporary issues in education and training aimed at: reducing violence, radicalization, extremism, drug and substance abuse; mainstreaming gender issues in education and training at all levels; promoting education in emergencies; preventing HIV and AIDS infections; promoting education for sustainable development (ESD) and enhancing mentorship, moulding and nurturing of national values.

Enabling Factors and Opportunities that influenced Programme implementation

In the implementation of planned activities, some of the enabling factors included: goodwill from partners and Government, media advocacy and multi-sectoral commitment in addressing pertinent

and contemporary issues. The education reforms have mainstreamed these issues, providing an opportunity for their implementation.

Challenges encountered in achieving Objectives

School learners continue to face a myriad challenges and issues owing to the legal, technological, socio-cultural and economic dynamics in society. Some of the challenges include: environmental and climatic change; social media influence; child labour; peer pressure; drug and substance abuse; conflict and crises; extreme violence and radicalization; terrorism and health issues; teenage pregnancies; cultural practices that create barriers to education and, inadequate parentalempowerment and community engagement. Other challenges include: inadequate budget allocation and bureaucracies in the process of development of Guidelines and Manuals.

Priority Interventions for the remaining NESSP Period

They key priorities for the remaining NESSP period are organized in terms of short-term, medium-term and long-term priorities as tabulated in Annex I.

2.15 COVID-19 Pandemic Impact on Education and Training

The emergence of COVID–19 brought a paradigm shift in curriculum delivery, learning assessments, teacher development and management, as well as quality assurance and standards. The pandemic hampered implementation of planned activities and disrupted learning for over 18 million Kenyan learners and trainees. The prolonged stay at home led to an increase in gender-based violence (GBV), teenage pregnancies, and child labour, among other vices. Furthermore, the pandemic aggravated mental and psychosocial challenges among learners, trainees, staff, parents and entire school communities. Families lost their livelihoods making it difficult for parents to provide for their children. There is, therefore, need for a psychosocial support programme for learners/trainees, teachers and other staff in the education sector. The next phase of NESSP should prioritize deployment of counsellors to offer psychological support services as well as the dissemination of relevant policies.

The pandemic led to total closure of learning institutions and changes in term dates. This created the need for remote learning during the period that learners and trainees were at home. It also led to increased use of technology in learning, enhanced digital knowledge and skills, increased research and innovation, and enhanced global interaction on education management and service delivery. However, some learners/trainees could not access internet services due to low penetration of internet, access to computers and electricity. Trainees were also not able to utilize online modes of delivery due to the practical nature of the TVET programmes. Specifically, due to COVID-19, the TVET sub-sector was unable to conduct an assessment on the capacity of physical facilities in TVCs and VTCs.

On the positive side, the COVID-19 pandemic greatly accelerated the uptake and use of digital technology for communication, work and leisure. Some universities and research institutions generated income from the manufacture and sale of hand sanitizers, which were in high demand in the local market. In addition, local university students innovated hospital beds and ventilators to serve COVID-19 patients in hospitals. Furthermore, COVID-19 pandemic led to the initiation of new research frontiers, including the international mapping of the COVID-19 virus genome as the basis

for research on the COVID-19 vaccine and the transmission mechanisms and means. There was also high media coverage of scientists explaining to the very receptive public about the COVID-19 virus, its mode of action, the consequences of contracting the virus, and the available measures to prevent infection. In May 2020, the National Research Fund (NRF) launched a strategic call for research funding named 'Collaborative Research on Coronavirus Disease (COVID-19)' for interested and qualified Kenyan researchers.

There is, therefore, need to prioritize internet connectivity and support for vulnerable learners/trainees for access to education. There will also be need to review teacher training to embrace online programmes in the next implementation phase. It is notable that during this period, inadequate resources for monitoring and supervision of all the activities during school closure led to lack of reliable and consistent data for evidence-based decision-making. There is thus need to develop a comprehensive monitoring and evaluation framework to track progress during emergencies. The next phase of NESSP needs to prioritize re-engineering of NEMIS.

Furthermore, in response to the COVID-19 pandemic, KNQA developed the KNREV Portal to ease Recognition, Equation and Verification (REV) of national and foreign qualifications. The portal works effectively, and those seeking REV services can access it within a shorter time than when using the manual process. In addition, the use of virtual meetings during the pandemic created opportunity for increased participation of national and international stakeholders. This enhanced a better understanding of qualifications frameworks globally. Additionally, it enhanced the development of regional and continental qualification frameworks. It also enhanced ICT integration in project management, and thus Young Africa Works projects were better managed by project managers which led to continuity of the planned programmes.

It is also worth noting that COVID-19 challenges brought about closer working relations with other government ministries, departments and agencies (MDAs) such as the Ministry of Health, Ministry of Water and Sanitation and the Ministry of ICT to ensure learning activities within schools were not interrupted. The new roles played by MDAs to reduce effects of COVID-19 within the education sector need to be mainstreamed within the NESSP to realign the planned activities to the new realities. Furthermore, in the next period of NESSP implementation, there will be a need to create an automated collaboration and linkages platform.

3.0 PART III: ANALYSIS OF KEY STRATEGIES

3.1 Governance and Accountability

Under governance and accountability, the key strategies to enhance service delivery was data management and formulation of policies.

3.1.1 Data Management in the Education Sector

Education data has been collected by multiple entities within and without the ministry of education, with each agency developing its own unique data set. This ad hoc method has often created a fragmented data set that gives different information on the education sector. Operationalization of NEMIS at primary and secondary level has led to harmonization and update of institutional databases. NEMIS has been instrumental in disbursement of learner capitation, Form One placement and medical cover for the secondary education learners. It also captures registration and physical aspects of an institution; details of learner related to registration, performance, progression and transition from one level to another. Use of NEMIS platform has been effective in provision of quality data that is reliable, relevant and easily accessible. The strategy has been effective and is relevant. However, there is a need to expand the modules to cover pre-primary, ACE, TVET and Universities.

3.1.2 Develop Policies, Regulations and Guidelines

Policies, guidelines and regulations provide the policy and legal basis for implementation of programmes proposed in NESSP 2018-2022.They guide implementation of education services in a harmonized way, which enhances service delivery. Education policy documents address issues related to governance and accountability, access, equity, inclusion and quality of education, as well as pertinent and contemporary issues in the society. The identified policies in NESSP 2018-2022 were relevant in addressing policy gaps in the education sector. The strategy for review of policies is effective in order to address gaps and emerging needs. This ensures that these policies are relevant and address current needs. However, the review reviewed that targeting policies for development did not consider immediate needs as shown by a number of new policies and guidelines developed in the medium term. Thirteen (13) policies/ regulations proposed in NESSP were developed/reviewed and an additional ten (10) developed due to emerging policy needs. The analysis points to effective policy formulation based on policy gaps identified from time to time.

The strategy on promotion of collaborations, networking and partnership is effective and relevant. The education sector is multi -agency in nature and involves different players including county governments, line ministries and agencies, development partners, civil society organizations, faith-based organizations, community-based organizations, foundations, private sector, among others. There is therefore need to harmonize all interventions and create linkages with various education players for effective service delivery.

3.2 Pre-Primary Education

On enhancing access, the strategy employed by all counties managed to hit the target of 83% from 77%. This was achieved by construction of more classrooms, employment of more pre-primary teachers, school feeding programme, among others. However, there is need to strengthen coordination structures at national, county and school levels to provide holistic child development and improve health and nutrition.

With regards to provision of quality pre-primary education the training of pre-primary teachers was done in all counties though not effectively carried out to all targeted teachers due to disruption from COVID -19, inadequate resources and weak linkages between National and County Governments. In

addition, the scheme of service for pre-primary school teachers has not been implemented by most counties.

Concerning inclusion of pre-primary school learners with special needs and disabilities, most counties have not purchased and provided relevant adapted teaching, play and learning materials. As much as the MoE developed the National Pre-primary Policy and Standards Guidelines, which was disseminated to all counties, most counties have not established County Early Childhood Education Committee, which should have brought on-board all-important sectors for holistic development of the child. In light of COVID-19, most ECDE centres were affected because no learning was taking place in the whole Country, and even when learning started, some counties were assisted by development partners to provide water, sanitation and hygiene facilities in pre-primary schools. County Governments encouraged teachers for vaccination, ensure protocol from Ministry of Health are observed in all learning centres, and teachers were trained how to handle learners in schools.

3.3 Primary Education

Improve school level governance and accountability in primary education was one of the strategies under governance and accountability. There was training of BoM and school managers sensitized on public finance management and leaners capitation and other grants utilization from the national, county and zonal levels in all primary schools at zonal levels by the Curriculum Support Officers (CSOs). Among the challenges observed included; all members of board of management needed training against the available budgetary allocation slot of three per school at the zonal level. It was also noted that the frequency of the training is crucial due to frequent change of leadership. The last major training was done a decade ago during the introduction of free primary Education (2003) when head teachers were trained fully on financial management. The new crop of head teachers has not received proper training on financial and leadership issues in primary school management. On the less, the strategy was effective in cascading the knowledge to the other BoM members during internal meeting in the school. Refresher trainings have also been organized by the zonal teams.

Under quality and relevance, the sector used the strategy of Integrating ICT in teaching and learning in primary education to improve on the learning outcomes. There was a plan to establish computer laboratories in each primary school although this has been hampered by the huge capital outlay required for over 23,000 primary schools against the availability of funds from the exchequer. The strategy was also envisioned to establish ICT integration in the education support system at the national, county, sub-county and institutional level. The recruitment of the ICT intern to support the schools while based at the regional education offices was on course. The interns have been recruited although the final deployment had not taken place due to financial constraints from the exchequer. The sector also planned enhanced National Volunteer Assistance Programme as a strategy to improve literacy skills in lower primary level. There was no Graduate Volunteer's Assistance (VGAs) trained and monitored under the programme due to lack of funding. Reduce disparities in access and retention to primary education strategy was used under equity and inclusivity. This involved planned provision of meals to learners in primary schools in marginalized and vulnerable areas, which has increased access and reduced absenteeism in targeted areas. Storage and fumigation challenges of the stores was noted in some regions. There was also the establishment of more boarding infrastructure facilities in LCB primary schools in ASAL and marginalized areas to increase enrolment. A total of 33 primary schools benefitted in construction of dining halls, dormitories and sanitation blocks in boarding school's infrastructure facilities improvement. Nonetheless, the second phase of the initiative was hampered by austerity measures leading to budget cuts. The strategy worked well although more non targeted areas demanded the same intervention against the limited financing.

Under access and participation, the sector planned for provision of additional infrastructure (classrooms, administration blocks, wash facilities) in primary schools across the country, which enabled several schools to provide a better leaming environment and attract more learners. However, the demands from the schools on the infrastructure far outweigh the budgetary allocation. Despite this scenario, schools in dire need were assisted subject to funds availability. This calls for a funding framework for financing capital and recurrent costs to cater for all school needs.

3.4 Secondary Education

The achievement of strategic objectives for secondary education shows mixed results. Whereas some are on track, others are lagging behind. This section analyses the strategies for secondary education in the strategic plan.

Increase Access and Participation to Secondary Education

Achievement of this strategic objective is measured through progress in GER and NER, as well as transition rate from primary to secondary education. Even though progress was made on GER, the achievement of the target is not as planned. Quantitatively, the actual achievement of GER was 99.58% and 96.39% of the targeted value in 2018 and 2019 respectively. This achievement was lower than the planned value as on average, the achievement in GER was 97.99% falling short by 2.01%. Similarly, progress of NER was 91.72% of the targeted value in review period. This falls short by 8.28%. However, the situation is different with the transition rate from primary to secondary as the achievement is higher than the planned value. The actual achievement was 100.6% and 101.6% of the targeted value in 2018 and 2019 respectively. On average 101.13% was achieved for the period, which was higher than the targeted value by 1.13%. Table 63 summarizes the achievement of the strategic objective of increasing access and participation to secondary education.

Table 65: ***Average Achievements on the First Strategic Objective***

S/No	Target	Percentage Achievement		
		2018/2019	2019/2020	For the Period
1	GER for Secondary Education	99.58	96.39	97.99
2	NER for Secondary Education	91.72	-	91.72
3	Transition rate from Primary to Secondary	100.60	101.66	101.13
Improving access and participation in secondary education		**97.30**	**99.03**	**96.95**

As indicated in the Table 63, the achievement of the strategy over the two years was 96.95%. This means that the strategic objective was well set and with a little more effort over the remaining period. This strategic objective will be achieved for the period of NESSP 2018-2022.

However, it should be noted that infrastructure development remains key in enhancing access to secondary education. This calls for development of a minimum package for infrastructure for secondary education. Such a package will guide the infrastructure development plan that will link the enrolment and the infrastructure development. This will be key in (i) including OOSC in secondary education and (ii) dealing with the challenges resulting from early pregnancies.

Equity and Inclusivity in Secondary Education

Achievement of this strategic objective is measured through progress in the female to male ratio of secondary completion rate, share of learners with special needs in public schools and the completion

rate. Table 64 shows the percentage achievement for each target measuring the achievement of the strategy on reducing disparities in access to secondary education.

Table 66: ***Average Achievements on the Second Strategic Objective***

S/NO	Target	2018/2019	2019/2020	For the Period
1	Female to male ratio of secondary completion rate	96.81%	101.04%	98.93%
2	Share of learners with special needs in public schools	100.00%	80%	90.00%
3	Completion Rate	92.68%	103.47%	98.08%
Reducing disparities in access to secondary education		**96.50%**	**94.84%**	**95.67%**

In terms of female to male ratio of secondary education completion rate the average achievement over the two years is 98.93%, falling short by 1.07%. On the share of learners with special needs in public schools, the average achievement over the two years is 90%, falling short by 10%. On the completion rate, the average achievement over the two years is 98.08%, falling short by 1.92%. As indicated in the Table 62, the achievement of the strategic objective over the two years was 95.67%. This means that the strategic objective was well set and with a little more effort over the remaining period, the strategy will be achieved for the period of NESSP 2018-2022.

Improve the Quality and Relevance of Secondary Education

Achievement of this third strategic objective is measured through progress in the share of secondary schools integrating ICT in education and percentage of learners scoring C+ and above in national examinations. Table 65 shows the percentage achievement for each target and the achievement of the third strategy on improving the quality and relevance of secondary education.

Table 67: ***Average Achievement of the Third Strategic Objective***

S/NO	Target	2018/2019	2019/2020	For the Period
1	Share of secondary schools integrating ICT in education	91.43%	103.33%	97.38%
2	Percentage of learners scoring C+ and above in national examinations	103.73%	117.79%	110.76%
Improve the quality and relevance of secondary education		**97.58%**	**110.56%**	**104.07%**

On the share of secondary schools integrating ICT in education, the average achievement is 97.38% falling short by 2.62%. In terms of the percentage of learners scoring C+ and above in national examinations, the average achievement is 110.76% exceeding expectations by 10.76%. As indicated in Table 65, the achievement of the third strategic objective of improving the quality and relevance of secondary education over the two years was 104.07%. This means that the strategy may have been soft and the need to revise the targets going forward. However, there are two of the planned activities that had not been implemented at the time of the review. Continued implementation of those activities may probably paint a different picture. The activities are greatly related to the current reforms and may be implemented towards the end of the strategic plan.

In addition, delay in Implementation of some of the activities is greatly impacting in the provision of quality education. For instance, delay in provision of laboratories equipment to secondary schools is

leading to the current shortage of 7877 laboratories to cater for the current enrolment of 3,289,885 recorded at the end of December 2020.

3.5 Adult and Continuing Education

On access and participation in ACE**,** it was planned to expand learning opportunities in ACE by 10 %. ACE enrolment has significantly decreased over the review period, constituting of 43.3% decrease in enrolment from 227,322 in 2017/18 financial year to 128,878 in 2021/22 financial year. This is a continuation of a trend which began prior to the implementation of NESSP 2018-2022, caused by inadequate funding and low awareness about ACE programmes.

The strategy did not address the problem because there were no adequate funds allocated to refurbish and equip the learning centres. The relevance of the strategy can be improved by equipping the adult education centres with the appropriate teaching and learning materials that address the learning needs of the learners. Besides that, adults are motivated by being trained in short courses that are geared towards enhancing their livelihoods. There is need to change the objective because there is no way participation of adult learners can be increased without offering a relevant curriculum, establishing more centres and recruiting more instructors.

On governance and accountability in ACE programmes, the directorate targeted to enhance capacity of ACE institutions management and BoMs. This was to be achieved through strengthening of ACE management structures to enhance the capacity of those entrusted with the advisory and oversight duty of the programme. Building the capacity of managers of ACE institutions in public finance management, resource mobilization, institutional leadership and performance management was a good strategy; but it did not attain the targeted number due inadequate funds.

On the other hand, MoE was to undertake Kenya Adult Literacy Survey by 2022. Due to the huge amount (Ksh.388M) required, it did not take off. It has been planned for a long intervention to allow resource mobilization. This strategy if undertaken could have not been relevant and effective to address governance issues. The multi-sectoral County Adult Education Advisory Committees were also not established because the committees perform delegated functions of the Special Board of Adult and Continuing Education (SBACE), which was not revived as anticipated because of logistical issues. Otherwise, this strategy could have been effective and relevant in enhancing governance and accountability in ACE programmes.

On advocacy and Publicity of ACE Programmes, it was anticipated that issues in adult education that are surrounded with stigma, as well as general lack of information can be addressed. The directorate intended to seek, engage and motivate a wide range of partners, stakeholders and the community to empower them and to raise awareness on the importance of participating in advancement of ACE. The programme intended to carry out systematic collection, processing, maintenance and dissemination of data to support decision making, planning, monitoring and management in the ACE sub-sector. The intended review and harmonization of ACE and Alternative Provision of Basic Education and Training (APBET) policies could have been effective but it was not done due to unavailability of funds. Community sensitization strategy on adult and functional literacy, with particular attention to adolescent girls was relevant but was not funded. This could have complemented and linked community outreach efforts to prevent and reduce child marriages. The intended development of a resource mobilization strategy could have been relevant and effective in enhancing advocacy and publicity of ACE programmes. It could have also solved the long pending issue of conducting the Kenya Adult Literacy Survey.

3.6 Inclusive Education for Learners and Trainees with Disabilities at Basic Education

Under the priority to improve access and participation of learners with special needs and disabilities, progressive transition to inclusive education and Functional Assessment and Early Intervention

Services in Education and Training programmes were planned to be implemented. The strategy to progressively upgrade schools' infrastructure and the upgrading of the material production workshop at Kenya Institute of Special Education (KISE) was relevant. However, it demanded heavy investment of financial resources which was not available. On the strategy to enhance functional assessment, the construction and equipping of the National Psycho-educational assessment Centre was achieved. The planned upgrading, equipping and staffing of 10 EARCs into centres of excellence to demonstrate best practices in educational assessment was relevant but due to inadequate resources; only two centres were upgraded partially.

To enhance quality and relevance in education and training for inclusive education, curriculum adaptation, adaptation of curriculum support materials, as well as training of personnel were relevant and were effectively implemented in the rollout of Competency Based Curriculum, (CBC).

On Governance and Accountability in Inclusive Education, awareness creation through public forums and outreach though appropriate were implemented on a small scale due to COVID -19 containment requirements. The development of EARC operational structure at the national, county and sub-county levels for EARCs and development of an inclusive education module in the National Education Management Information System, were both relevant and were achieved.

3.7 Teacher Education, Professional Development and Management

The sector implemented 4 key strategies under teacher training reform and management. The following is the strategies appraisal: Recruitment of additional teachers to reduce the burden of parents in engaging BoM teachers achieved the intended outcome although reduction was also as a result of recruitment of intern teachers. The recruited teachers were posted to schools with highest shortage to minimize disparities. Given that the pupil to teacher ratio was better than the target of 40:1, then the strategy was relevant. In terms of funding additional recruitment required additional funding and hence sector can give more emphasis to redistribution of teachers. As far as addressing teacher shortages was concerned, they have persisted due to growth in enrolment and establishment of new school. This still remains a challenge to the sector.

Regarding utilization and deployment of teachers, the sector was to come up with new staffing norms and develop a framework for distribution and deployment of teachers. The process of developing staffing norms was delayed as a consultant was not identified during the first invitations to tender. This meant that the framework could not be developed. The commission has already identified a consultant who will develop the new staffing norms. The staffing norms will address the issues of the hard to staff areas. Thus, it will be a relevant approach to the challenges of teacher distribution.

On teacher utilization the commission rolled out the TPAD process, which has improved time utilization among teachers. It has also moved towards standardization of the teaching and learning process. However, the issues on supervision and monitoring require to be harmonized.

On teacher training reform, the sector has developed a framework, which will guide the improve the quality of the teacher. The strategy also involved improvement of infrastructure. The multi-programme approach will result to better quality of teacher training. However, the issue of training based on need will be important to avoid a situation where trained teachers are not able to be absorbed by the education sector.

Under capacity building strategies, the sector has made strides as most of the key players have been trained on CBC and CBA implementation. It has been noted that due to the constraints in terms of time funding, the training were not efficiently and effectively carried out. This may call for a review

of the training programmes to address emerging issues. One of the areas to be addressed is the issue acceptance by teachers' unions and other stakeholders. The Court process was concluded but there is need for more consensus building on the issue of CBC.

3.8 Technical and Vocational Education and Training

Developing Infrastructure and Equipping TVET Institutions remains a vital and relevant strategy implemented by the sub sector. To improve accessibility of technical education to all eligible trainees at national and local level, the government planned to set up TVCs in every constituency and VTCs at the ward level. This strategy has been effective since it has led to proximity of available TVET institutions to potential trainees. With better equipped institutions, the sub-sector has succeeded in promoting acquisition of market-ready skills.

To complement the constructions, the sub sector equipped the institutions with modern training equipment to enable the trainees to attain market-ready skills. This initiative together with other interventions led to the increase in enrolment in TVET institutions.

It is worth noting that there is regional and institutional variation in infrastructure and equipment. This has in effect led to disparities in the number of trainees enrolled in TVET institutions with National Polytechnics registering a high of more than 10 thousand and the newly operationalized TVCs having an enrolment as low as 200 per institution. The most affected counties are in the arid and semi-arid areas such as: Wajir, Mandera, Marsabit, Garissa, Kwale, Lamu, Isiolo, Turkana, West Pokot, Kajiado and Samburu. Moreover, efforts towards sensitizing the community on the essence of utilizing the available TVET institutions is key.

Rebranding and Repositioning TVET: This is an on-going strategy that has been effective as the sub sector has witnessed a reduction in the negative perception towards TVET. TVET has attracted an increased number of trainees. For example, in FY 2019/20, a total of 2,690 Form 4 graduates who scored C plus and above opted for TVET courses while in 2020/21, the number increased to 3,280. The sub sector implemented a number of activities towards rebranding and repositioning, which include advocacy, equipping, deployment of trainers and capitation, amongst others. The capitation grants has made TVET more affordable and attracted more trainees.

The Government has increased public spending on technical education and training. The sub-sector budget as a percentage of total education budget increased substantially between 2017/18 (by 2.7 per cent) and 2019/20 (by 5.4 per cent). The resources were utilized in recruitment of training instructors, creation of new training institutes, ensuring that TVETA is certified, payment of capitation grants and assessing the development of the new curriculum. The strategy has remained relevant for it has cut the cost of TVET, which had been a significant hindrance to accessing training services. However,a Differentiated Unit Cost (DUC) is yet to be established, TVET Funding Board is not yet established and TVET Career Guidance and Counselling Guidelines has not been developed.

Promoting Inclusive Training in TVET was another strategy that has also been effective. The provision of adapted assistive devices to the four special TVET institutions enabled more special needs trainees to access training. The number of female trainees participating in STEM courses has also increased. The Strategy has remained relevant as it seeks to improve parities in TVET training. It has ensured increased enrolment of trainees from disadvantaged regions, trainees with special needs and disability, as well as increasing their participation in STEM subjects.

Developing a Competency Based Education and Training (CBET) Curriculum as a strategy was employed to improve quality and relevance of TVET training in Kenya. This strategy has been effective and relevant since CBET has been rolled out. With the uptake of CBET, the sub-sector has

succeeded in promoting acquisition of market-ready skills since its main aim is to eradicate mismatch between the skills graduates acquire and demands from the industry.

The sub sector developed 164, 163 and 51 curricula from the occupational standards in the FY 2017/18, FY 2019/20 and FY 2020/21 respectively. Digital content was developed for 10 CBET courses in FY 2020/21, while 69 and 81 learning guides were developed in the FY 2019/2020 and FY 2020/21. A total of 43, 11 and 15 Sector Skills Advisory Committees were appointed in the FY 2018/19, FY 2019/20 and FY 2020/21 respectively. The sector developed and launched CBET Policy framework in the FY 2018/19, which is guiding in the implementation of CBET.

On Competency Based Assessment, the sub-sector built the capacity of 5,194, 5,610 and 2,368 trainers and industry experts as assessors and verifiers in FY 2018/19, FY 2019/20 and FY 2020/21 respectively. A total of 1,000, 4,114 and 701 assessment tools for units of competency were developed in FY 2018/19, FY 2019/20 and FY 2020/21 respectively. In addition, 220 mentoring tools were developed in FY 2019/20 and 123 in FY 2020/21. The sector conducted assessment to 172, 238 and 854 candidates in the FYs 2018/19, 2019/20 and 2021/21 respectively. Under the review period, the sector digitized the certification process for the CBET graduates.

Conducting Trainer Management Services is a strategy that has been relevant and effective. With recruitment of 3000 trainers for TVCs, the sub-sector has succeeded in promoting acquisition of market-ready skills. These trainers were able to impart skills to trainees in several TVCs and equipped them with the much-needed market-ready skills.

Under Up-skilling of TVET trainers: a total of seventy (70) trainers were upgraded from diploma to degree level and 60 upgraded to diploma level under the GoK/AfDB project. Another lot of 380 trainers were admitted to three universities: Technical University of Mombasa (TUM), Dedan Kimathi University of Technology (DeKUT) and Technical University of Kenya (TUK) in the FY 2016/17 to undertake a two-year degree programme in Engineering and Technology. Two hundred and sixty-eight (268) trainers were trained on the use and maintenance of equipment and Competency Based Education and Training (CBET) curricula under the GoK/China project in FY 2018/2019. Out of 1,825 trainers recruited in the FY 2019/20, 508 have been identified for up-skilling and currently are admitted at KTTC for pedagogy related training.

Strengthening TVET Accreditation and Quality Assurance: This strategy was to ensure that trainees have access to quality training, which will equip them with market ready-skills. The strategy remains relevant and has been effective. Through TVETA, the sub sector has been able to accredit 2,313 TVET institutions. Mapping of all public TVCs and VTCs has been done.

Integrating ICT in Curriculum Delivery and Assessment: This strategy is relevant but has been partially effective since not all deliverables were achieved. Despite the sub-sector embracing ICT integration, a number of institutions (newly operationalized TVCs and VTCs) still lack the requisite ICT infrastructure and internet connectivity.

3.9 University Education Sub Sector

This section presents an analysis of programme 2.1 on University Scholarship, Loans and Bursaries under policy priority 2, aimed to enhance equity, inclusion of university education and afford equal opportunity to university education for all eligible students in terms of effectiveness and relevancy. This programme involves provision of Government scholarships and bursaries to deserving and needy students who meet the admission criteria. It targets students from disadvantaged socio-economic

backgrounds, students with special needs and female students in SET programmes. This programme had the following activities:

Review the Differentiated Unit Cost (DUC) criteria to cater for students admitted under affirmative action and females in SET courses: The activity is relevant and should be looked into for this objective to be achieved, although the target has not been achieved; there is a discussion on policy development; which will be able to review DUC and sort issue on financial challenges in the universities. Its effective will only be realized after finalization of the Policy.

Provide HELB loans to all students in all universities: The activity is relevant, however 23% of students who applied for HELB loan were not awarded. In 2018/19, HELB granted loans to 304,660 students against 424,455 applications while in 2019/20, 347,384 students were facilitated against 417,353 applications. This shows that there is still a huge gap, which need to be looked on to ensure equity in university education.

Increase capitation to Government sponsored students: The activity is relevant. However, the Government has not been able to achieve it due to budget rationalization. Covid-19 has negatively impacted capitation by taking quite huge amount of the national budget this has hit hard universities and are unable to run due to financial challenges, hence there is need to review how to increase capitation to universities in future. Since it has not been achieved it is not possible to measure its effectiveness.

Provide bursaries to students from disadvantaged socio-economic backgrounds: The activity is very relevant since it aims to enhance equity in university education. A total of 41,888 students have been awarded bursaries under the review period.

Apply affirmative action in placement of students with disabilities and minority groups in university programmes where there is under representation: The activity is relevant since it aims on inclusion of university education and afford equal opportunity to university education for all eligible students in terms of effectiveness and relevancy. A total of 3,312 were placed to universities under the affirmative action; 1,042 under gender, 2,245 from marginalized areas and 25 from PWDs.

3.10 Science, Technology and Innovation Sub-Sector

The key Science, Technology and Innovation (ST&I) sub-sector strategies selected for the National Education Sector Strategic Plan (NESSP) Mid-Term Review are:

- Policy Priority 2: Access to Science, Technology and Innovation; and
- Policy Priority 3: Equity and Inclusivity in ST&I.

The significance of ST&I in Kenya is underscored in the Kenya Vision 2030 development blueprint and the ST&I Act, 2013. The above two selected Policy Priorities (2 & 3) are critical for enhancing access and participation in ST&I and increasing the representation of under-represented groups in ST&I, particularly women and the youth.

Policy Priority 2: **Access to Science, Technology and Innovation**

I. Effectiveness

a) Programme 2.1: Developing Infrastructure and Providing State-of-the-Art Equipment to Support ST&I: For this Programme, three of the planned activities are in their initial stages of development, while the others are yet to be initiated. With this scenario, it is not possible to comment on the extent to which each has contributed to enhancing access to ST&I. The constraining factors

include: lack of funds allocation to specific activities, and changing Government priorities during different financial years. The unintended results include: failure to develop the infrastructure and provide state-of-the-art infrastructure, delays in completing research work and/or failure to undertake some analyses. As this situation continues, the country is faced with inadequate ST&I facilities, slow modernization, poor country-wide distribution networks and limited accessibility.

b) Programme 2.2: Improving Intellectual Property Rights Regimes of Science, Technology and Innovation: For this programme, none of the activities, which had been earmarked has been completed, only 'Developing and implementing a Sector Intellectual Property Rights Policy' has been initiated. However, NACOSTI developed Intellectual Property Policy Guidelines for Academic and Research Institutions in Kenya in February 2021. A number of universities and research institutions have Institutional Intellectual Property Rights Policies which need to be harmonized. These policies increase awareness and appreciation of IPR among practitioners, hence securing research innovations through IPR and maximizing their delivery, uptake, sustainability and impact. An online survey undertaken by NACOSTI in collaboration with the World Intellectual Property Organization (WIPO) on Institutional Intellectual Property and Research Assessment in Kenya, provides information on the enabling and/or constraining factors that influence the effectiveness of this Programme.

c) Programme 2.3: Innovation, Technology Transfer and Commercialization: For this programme, none of the planned activities has been completed, while some are yet to be initiated. However, its aim was to consolidate the innovation capabilities and incorporate ST&I actors to be able to acquire and exploit technologies available locally. It is not possible to comment on the enabling and /or constraining factors that influence the effectiveness of this programme. Similarly, it is not possible to point out the results, intended and unintended.

II. Relevance

a) Programme 2.1: Developing Infrastructure and Providing State-of-the-Art Equipment to Support ST&I: This Programme is very crucial and relevant in addressing the needs of the sector if all planned activities would be implemented. COVID-19 pandemic exacerbated the need for such equipment and in case of other emergencies/pandemics, special equipment is always needed.

b) Programme 2.2: Improving Intellectual Property Rights Regimes of Science, Technology and Innovation

If fully implemented, this programme would increase awareness and appreciation of IPR among practitioners, stakeholders and policy makers. It would increase the level of uptake and commercialization of intellectually-protected products and services which ensures establishment of formal structures for technological capability-building and appropriate technology transfer.

c) Programme 2.3: Innovation, Technology Transfer and Commercialization: This programme was very relevant for consolidating the innovation capabilities and incorporating ST&I actors to be able to acquire and exploit technologies available locally. The role of innovation, technology transfer and commercialization is of priority in Kenya. It needs to be supported from all fronts and especially now when the levels of unemployment in the country are very high.

Policy Priority 3: Equity and Inclusivity in ST&I

Programme 3.1: Promoting equitable and inclusive participation in ST&I

I. Effectiveness

ST&I Policy Priority 3 strategy on equity and inclusivity in ST&I will have limited contribution to the overall NESSP objectives unless a more strategic approach is adopted going forward. By 2020/2021, its only programme, ST&I Programme 3.1 on promoting equitable and inclusive participation in ST&I, had only implemented one activity: the Science, Technology, Engineering and Mathematics (STEM) mentorship programme for girls and boys in secondary schools. The four activities for women in ST&I and the activity for the marginalized groups, however have not been initiated to date. However, over 85,000 secondary school boys and girls were mentored in STEM. This indicates that the Government has embraced empowerment of youth in ST&I but still needs to address the critical importance of improving gender equity in ST&I by increasing the number of women researchers and innovators. Hence, this strategy will not be able to attain its strategic goal of enhancing equity and inclusion in ST&I and its target of increasing the proportion of special interest groups and researchers in the national population; unless a targeted intervention to implement the planned women's activities is made before the NESSP (2018-2022) ends. The promotion of women in ST&I is essential in unlocking equitable and inclusive participation in ST&I for themselves and the other NESSP special interest groups; like the marginalized. The sustainability of the efforts to attract and retain youth into ST&I, particularly girls, will remain elusive if there are insufficient women mentors in ST&I.

The extent of ST&I programme 3.1 achieving its goal cannot be estimated since only one out of the six planned activities has been implemented and this only at one level: secondary school education. The main enabling factor is the improved consciousness of the importance of the female perspective in ST&I. The main constraining factors are gender stereotyping, systemic barriers and institutional rigidity with regard to effective participation of women in ST&I. The consequences or unintended results are both positive and negative. On the positive side, this NESSP strategy has led to the initiation of two youth programmes in ST&I: STEM Mentorship for Girls Programme and the Young Scientists for Kenya (YSK) Programme at NACOSTI, which did not exist before NESSP (2018-2022). On the negative side, the lack of adequate affirmative action and effective promotion of women researchers, and innovators has led to losses of opportunities for women and girls themselves, and potentially, the other special interest groups identified in NESSP i.e. youth in the science, engineering and technology (SET) workforce, persons with special needs and disadvantaged groups including those from marginal areas. Policy Priority 3, if well implemented, would be highly effective in eliminating the existing gender disparity in ST&I.

II. Relevance

The vital contribution made by STEM in addressing essential human needs, improving the quality of life and creating opportunities for sustainable wealth-creation is evident in the developed countries that Kenya wishes to emulate. Women and youth are under-represented in ST&I due to preventable hurdles to their increased participation in research and innovation. Hence, the strategy on equity and inclusivity in ST&I is entirely appropriate to meet the real needs and priorities of the prioritized special interest groups in NESSP (2018-2022): namely, women, youth and the marginalized. Therefore, there is urgent need to tap into their talents for ST&I and consolidate it to build impactful

national and international research and innovation programmes for Kenya's sustainable development. This strategy is operating within a challenging policy and physical environment. The policy environment largely favours the status quo that denies the inequity existing between men and women in ST&I. In the physical environment, the onset of COVID-19 pandemic in Kenya in mid-March 2020 was a major disruption for ST&I activities and outreach targeting women and the youth.

Nevertheless, some youth activities took advantage of digital technology to continue online. However, many women activities in ST&I were curtailed by their retreat to caregiving activities on the home front; given that COVID-19 pandemic relegated the majority of Kenya's population to stay at home most of the time where women played a central domestic management role. In addition, the increased gender-based violence (GBV) that occurred did not spare women and youth in ST&I. Relevance can be improved under the changed context through gender mainstreaming in ST&I; fully implementing NESSP activities for women researchers and innovators as COVID-19 restrictions get lifted. Full implementation of ST&I programme 3.1 is expected to bring women and youth issues in ST&I firmly on board. This is envisaged to result in stronger partnerships between men and women researchers and innovators and the transformation of ST&I sub-sector. Consequently, there will be expanded opportunities for women and youth in ST&I and mitigation of the risks in the unsustainable 'business-as-usual' approach.

In addition, the strategy of equity and inclusivity in ST&I is highly relevant in the unfolding 4th Industrial Revolution, which is merging technology and life on the professional, home and leisure fronts where men, women and youth interact on a daily basis. Implementation of the gender mainstreaming activities in ST&I should go hand-in-hand with capacity-building to appreciate the real gender gap in ST&I and the need for targeted affirmative action for women and girls in the remaining NESSP implementation period.

3.11 Quality Assurance and Standards

The major challenges encountered include lack of funds, which has hindered the progress of planned activities such as embedding IBQA in NEQASF, the development of the IBQA manual and the training of stakeholders. The assessment of institutions of learning using NEQASF was not conducted due to lack of funds as well as staff shortage. There is also acute shortage of QASOs to carry out quality assurance and standards in education institutions.

3.12 Kenya National Qualifications Framework

Under Kenya National Qualifications Framework, the key strategies to enhance access to education and training qualifications and assure quality, and credibility of national qualifications are to develop a qualification framework and national quality assurance policy.

Effectiveness in achieving the desired goals

In ensuring that there is access to education and training qualifications, an effective strategy was to develop a qualification framework and qualification system. Qualification's framework learning outcome-based qualifications framework, comprising of all educational and training sectors and all forms of learning; formal, non-formal and informal learning. The framework comprises of levels, each being identified by a unique set of level descriptors. In order to place a qualification on any KNQF level, the learning outcomes of each unit comprising a qualification and the overall qualification learning outcomes are mapped against these level descriptors. At each level, the level

descriptors are classified into three separate strands (categories) covering knowledge, skills and competencies. Qualification's systems include the means used to develop and operationalize national qualifications policies, institutional arrangements, quality assurance processes, assessment and award processes, recognition of skills and other mechanisms linking education and training to the labour market.

Figure 11: **Current Challenges Facing the Education and Training Sector in Kenya**

Additionally**,** KNQF has enabled access to education and training by developing Policy frameworks for recognition of prior learning and credit accumulation and transfer system. The Policy framework on Recognition of Prior Learning (RPL) acknowledges learning outcomes achieved through a range of experiences in informal and non-formal setups. These include employer-provided training and experiential learning that results from daily activities related to paid or unpaid work, family or community life, or leisure, mainly involving incidental learning.

To ensure full benefit to the RPL candidates, a tailor-made Credit Accumulation and Transfer System (CATS) will be developed. It will facilitate the determination of credits assignable to non-formal or informal learning acquired through productive work or life experiences, thereby providing for upwards reticulation in the education and training progression pathways.

Relevance in Terms of Quality

The Kenya National Qualifications Authority has developed and is now implementing is part of Kenya's international commitments to develop an accurate, reliable and robust database of all qualifications in the country that will allow for comparability, equation, recognition and information sharing of qualifications globally.

During the implementation of NESSP, some Qualifications Awarding Institutions (QAIs) were registered and accredited using developed standards and guidelines, and ensuring the effectiveness of this process, National Qualifications Information Management System (NAQIMS: https://naqims.knqa.go.ke//). NAQIMS will ensure that all qualifications and part of qualifications go through quality procedures as guided by standards and guidelines on registration and accreditation.

3.13 Cross Cutting and Contemporary Issues

Under cross-cutting issues, the analysis focuses on promotion of education in emergencies and mainstreaming gender issues in education and training, which are key strategies in integrating contemporary issues and values in education and training.

Mainstream Gender Issues in Education and Training at all Levels

Ensuring access to equal educational opportunities to both boys and girls is key for socio-economic development of the country. Kenyan girls and boys are adversely affected by gender issues ranging from female genital mutilation, teenage pregnancies, early marriages, child labour and other socio-cultural practices which affect participation in the learning process. Gender-mainstreaming in education and training plays a key role in addressing gender-related barriers and promotes retention and learning achievements. The integration of a gender perspective promotes equity and combats discrimination in learning institutions; hence creating a cohesive society. This strategy is effective and relevant in addressing the needs of both girls and boys in learning environments.

Promote Education in Emergencies

Learners experience challenges in accessing quality education during emergencies. Man-made and natural disasters such as floods, droughts, fires, cattle rustling, inter-ethnic clashes, terrorism, political instabilities, including diseases such as the COVID-19 pandemic, disrupt learning. Putting in place guidelines and policies for disaster-preparedness, response and management promote continuity of education during emergencies. Continuous sensitization and awareness creation among learners creates a resilient culture and systems to ensure continuity of learning. Building the capacity of relevant stakeholders on disaster-preparedness and response, and providing guidelines on safety and health standards, is effective and relevant in promoting education during a crisis.

The strategy for developing guidelines to mainstream cross-cutting issues in education and training was effective in ensuring pertinent and contemporary issues are provided as learner-support areas through the curriculum. A sensitization strategy on implementation of policies, regulations, guidelines and utilization of manuals was effective and relevant.

4.0 PART IV: ANALYSIS OF SECTOR BUDGET 2018-2020 (BUDGET REVIEW)

4.1 Financial Resource Requirements for NESSP

Implementation of NESSP programmes and activities was projected to cost of KES 3.554 trillion over the 5-year period, divided into KES 3.025 trillion under recurrent and KES 517.45 billion under capital expenditure. The annual projections for the period are shown in Table 68.

Table 68: ***Financial Resource Requirements for NESSP***

NESSP Requirements						
Cost Type	**2018**	**2019**	**2020**	**2021**	**2022**	**TOTAL**
Total Recurrent Requirement	456,528	604,451	663,444	641,954	659,579	3,025,956
Total Development Requirement	22,720	113,350	128,641	142,470	110,449	517,450
Total Requirement for NESSP	**479,248**	**717,801**	**791,905**	**786,445**	**772,050**	**3,553,506**

4.2 Budget allocation Vs Actual Expenditure

Approved budget and actual expenditure for the NESSP period is shown in Table 69.

Table 69: ***Approved vs Actual Expenditure for NESSP***

	Approved Budget			**Actual Expenditure**		
	2018/19	**2019/20**	**2020/21**	**2018/19**	**2019/20**	**2020/21**
Total Recurrent	439,007	479,550	469,528	428,233	449,347	454,769
Total development	33,484	18,550	19,828	26,592	15,350	15,318
Total	**472,491**	**498,100**	**489,356**	**454,825**	**464,697**	**470,087**

The actual expenditure as a percent of requirement average 83% but has consistently declined from 94% in the first year of NESSP implementation to 59.4% in FY 2019/20. The average for recurrent expenditure was 78.8%, while that for development was 49.4%.

Education expenditure as a share to the national budget dropped marginally from 20 percent in 2018 to 19 percent in 2020. That share of recurrent expenditure dropped from 22 percent in 2018 to 21 percent in 2020. Recurrent expenditure for the main economic activities is shown in Figure 11.

4.3 Recurrent Budget

The sector spent KES 428,233M against an approved budget of KES 439,007M in 2018/19, KES 449,285M against approved budget of KES 474,904 M in 2019/20, KES 454,769M against approved budget of KES 469,528 M in 2020/21. In FY2020/21, TSC received the largest funding from the sector with a Gross of KES 274,950M followed by Early Learning and at KES 88,224 M and University Education and Research at KES 87,836M. Vocational and Technical Training was funded at Ksh 18,392M and Post-Training and Skills Development received the least funding at KSH 126 M.

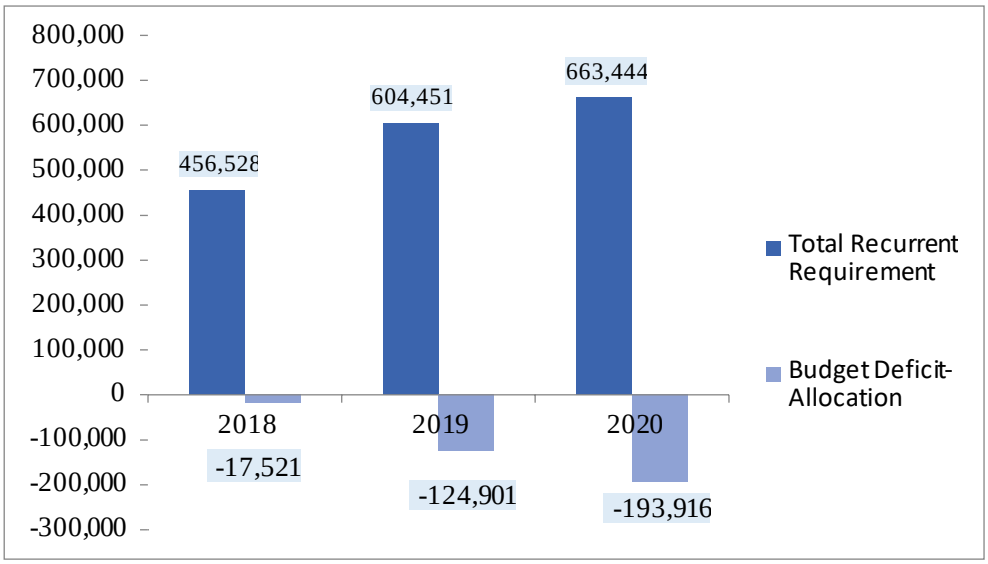

Figure 12: **Recurrent Budget Performance, Requirements Vs Budget Deficit**

The deficit continued to increase from Ksh 17,521M; Ksh 124,901M and Ksh 193,916 M in the years 2018, 2019 and 2020 respectively.

4.4 Development Expenditure

On development the sector spent KES 57,260 M against an approved budget of KES 71,862 M during the period under review.

On actual expenditure for 2020/21, TSC absorbed 99 percent, Early Learning and Basic Education absorbed 98 percent, Post-Training absorbed 97 percent, University and research absorbed 90 percent while Vocational and Technical Training absorbed 83 percent of the Budget provision. Figure 12 shows the approved versus actual expenditure.

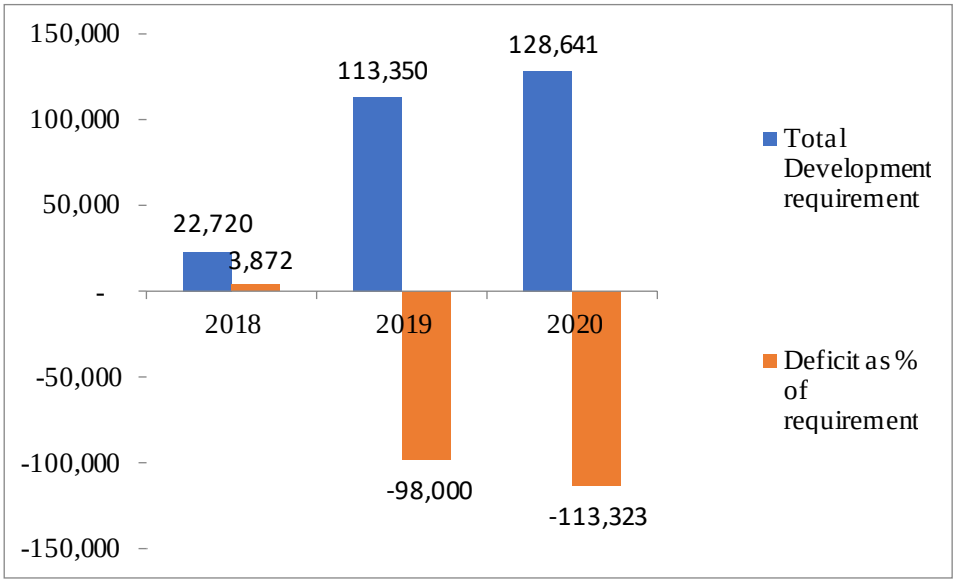

Figure 13: **Development Budget Deficit**

The deficit continued to increase from Ksh 3,872 M; Ksh 98,000M and Ksh 113,323 M in the years 2018, 2019 and 2020 respectively signalling a bad trend for the remaining two years.

Table 70: ***Budget Allocation per sub Programme***

Programme	2018/19	2019/20	2020/2021
Primary Education	20,396	19,881	20,355
Secondary Education	68,707	65,446	68,689
Quality Assurance and Standards	4,331	4,687	3,466
Technical Vocational Education and Training	18,230	21,508	22,452
Youth Training and Development	2,156	2,110	2,100
University Education	108,865	121,016	91,152
Research, Science, Technology and Innovation	2,654	2,218	840
Teacher Resource Management	233,823	249,442	267,060
Governance and Standards	*542*	402	1,003
Workplace Readiness		23	15
Post-Training Information Service		19	7
General Administration, Planning and Support Services	12,142	11,358	12,216
Total for the Sector	**471,846**	**498,110**	**489,355**

5.0 PART V: CONCLUSION, LESSONS LEARNT AND RECOMMENDATIONS

This part concludes on the mid- term review in each NESSP thematic area- governance and accountability, access and equity, quality and relevance, pertinent and contemporary issues. It also provides key lessons learnt in NESSP implementation and make recommendations on accelerating progress in the remaining period. Areas requiring further research are also highlighted.

5.1 Conclusion

5.1.1 Governance and Accountability: During the review period, NEMIS at primary and secondary level leading to harmonization and update of institutional databases. The system was used to disburse capitation, place Form One pupils, and provide medical cover for the secondary education learners. This has however not been expanded to VTT, and University education to comprehensively cover the sector.

5.1.2 Pre-Primary Education: Pre-primary GER improved from 76.6% in 2018 to 109.4% 2019 aided by a number of factors including employment of additional teachers, training of teachers on the Competency Based Curriculum (CBC), improvement in infrastructure, and introduction of school feeding programmes in 29 counties.

5.1.3 Primary Education: Primary school GER improved from 104 percent in 2018 to 99.6 percent in 2019, an indication of leaners attending school at the right age. The Net Enrolment Ratio (NER) stood at 92.5% in 2018, and was on track towards meeting 93.1% NESSP target. There was however a decline in enrolment from 10,389,826 in 2018 and 10,072,040 in 2019.

Primary Completion Rate (PCR) increased from 84.2% in 2018 to 85.4% in 2019. The 100% target is unlikely to be met by the end NESSP period. Gender parity stood at 0.972 in 2019 and was on track to achieving 1:1 targeted. There were great disparities in Mandera (0.58), Wajir (0.75) and Garissa (0.81) counties. The number of public SNE institutions increased by 6% accounting for 13% of all public primary schools.

A number of measures were pursued to mitigate the impacts of COVID-19 on primary education. These included provision of masks in conjunction with education partners and provision of hand washing facilities.

5.1.4 Secondary Education: Transition from primary to secondary education improved over the review period. However, there exist challenges of retention and disparities based on gender and region. There is a need to prepare adequately for seamless transition from Grade 6 to Junior secondary.

5.1.5 Adult and Continued Education: Enrolment in ACE declined over the plan period, from 227,322 enrolled students in 2017, to 180,395 in June, 2021, translating to 25.2% drop. The 10% growth target for 2022 is therefore off-track. On improving the quality and relevance of ACE programmes, the proportion of ACE learners achieving functional literacy doubled from 8% in the base year to 16% in 2019 before dropping to 12% in 2020. One hundred (100) graduate instructors were recruited and deployed in the year 2020. In curriculum reforms, a costed schedule of activities and a needs assessment proposal were developed but was yet to be approved. Only 380 of the targeted

3,875 ACE institutions received training on public financial management towards improving governance and accountability.

5.1.6 Inclusive Education for Learners and Trainees with Disabilities: Adaptation of curriculum support materials was undertaken majorly in pre-primary and primary education. However, there is need to upscale adaptation in secondary, and adult and continuing education.

5.1.7 Teacher Education, Professional Development and Management: There was achievement in rebranding the teacher education and professional development and management. However, teacher shortage still persists and therefore there is need to allocate more resources to recruit additional teachers at both levels.

5.1.8 Vocational and Technical Training: The trainee's enrolment increased by 43.17% as a result of the expansion of infrastructure, capitation grants to trainees and equipping of the institutions. The number of TVCs and VTCs increased to cater for the growing number of trainees. Further, there was improved public perception towards TVET which contributed to the enrolment. For example, in FY 2019/20, 2,690 Form 4 graduates who attained university entry score opted to join TVCs while in 2020/21 the number increased to 3,280. However, the sub sector has not been able to complete the construction of TVCs due to inadequate budgetary allocations. This has made some projects to be behind schedule.

5.1.9 University Sub Sector: Achievement under increasing access to university education include upgrading of infrastructure in six out of seven constituent colleges; finalization of draft policy on career guidance and counselling and development of ODEL guidelines.

On enhance equity, inclusion of university education, affirmative action in placement of students was achieved through KUCCPS by lowering the overall cut-off points for degree programmes for female applicants and minority and marginalized groups, and lowering cut-off points of specific programmes in order to attain a certain percentage of representation.

Under enhancing quality and relevance of training and research 438 academic programmes were reviewed, 19 quality inspection audit conducted and 3 centres of excellence in critical are of the economy established. Further, 62 senior university management and university council members were trained in governance and strategic management

5.1.10 Science, Technology and Innovation: Key achievement under STI include training of 234 lecturers and researchers from public universities, research institutions and national polytechnics to enhance research skills in 2019/2020. Some 286 researchers were trained on research ethics, while 40 research personnel were trained on Intellectual Property (IP) policy, commercialization and technology transfer, in 2020/2021. Another 345 research personnel were trained on biosafety compliance and clearing house, environmental risk and food safety assessments of Genetically Modified Organisms (GMOs) and, genome editing and emerging techniques.

On ST&I infrastructure, Konza Technopolis was under development with design works completed and reports for the three priority laboratories (Theoretical and Computational Science Lab, Material

Science and Engineering Lab, and Mineralogy and Nanotechnology Lab). A Science Park at Dedan Kimathi University of Technology (DeKUT) was under construction.

5.1.11 Post-Training and Skills Development: Achievement was made in the development of policy frameworks including the Office of Career Services. However, there is a need to continue operationalizing the departmental functions.

5.1.12 Quality Assurance and Standards: The major challenges encountered include lack of funds, which has hindered the progress of planned activities such as embedding IBQA in NEQASF, the development of the IBQA manual and the training of stakeholders. The assessment of institutions of learning using NEQASF was not conducted due to lack of funds as well as staff shortage. There is also acute shortage of QASOs to carry out quality assurance and standards in education institutions.

5.1.13 Kenya National Qualification Authority: The development of KNQF 2018 Regulations enhanced the quality of qualifications and creation of learning pathways and lifelong learning by developing policies, guidelines and standards. Its implementation is on course with the help of key stakeholders in the country.

5.1.14 Cross-Cutting and Contemporary: Pertinent and contemporary issues continue to create barriers in the provision of quality, equitable and inclusive education. There are also emerging issues that negatively impact on education and training. There is therefore need for continued integration of pertinent and contemporary issues in education, as well as provision of resources for effective implementation. There is also need to invest in and strengthen the existing education system to enable it to expand and support refugee learners enabling mutual benefits for refugee and host community children and youth.

5.2 Lessons Learnt and Recommendations

5.2.1 Governance and Accountability

Policy Formulation for effective service delivery component bring out uniformity in the implementation of programmes hence improve service delivery. The legal framework helps to ensure institutions operate within the law and also help to regulate institutional practices and behaviour. Some lessons learnt include the need to disseminate and sensitize stakeholders on the availability and provisions of policies for effective service delivery. Cascading of policies to ensure there is linkage with institutions is crucial, as well as strengthened monitoring and evaluation. However, the challenge of funding for development of policies and guidelines persists, as well as inadequate dissemination of policies.

Further, COVID-19 pandemic has brought a paradigm shift in delivery of services and new inter-sectoral linkages to cope with the Ministry of Health guidelines; the Water and Sanitation Sector, the Health Sector and ICT Sector are among the key sectors that participate directly in learning activities within the schools. The education partners, civil society, foundations, communities and private sector's role in supporting learning during the pandemic, cannot be underestimated. The new collaborations and roles of these sectors within the education sector need to be mainstreamed within NESSP. There is there need for an inter-governmental framework to be developed in the next phase to ensure smooth coordination and service delivery.

Recommendations

i. Need to strengthen the use of research to inform policy development and/or review
ii. Clarify role of partners and other agencies in NESSP implementation;
iii. Creating awareness on the availability and provisions of policies and regulations;
iv. Strengthen monitoring and evaluation on the implementation of policies;
v. Establish a mechanism to enforce compliance with the requirements in policies legislation;
vi. Promote integration of pertinent and contemporary issues in education and training; and
vii. Scale up data management in education and training.

5.2.2 Pre-Primary

The counties have made tremendous achievements in GER from (77% to 83%) through building of classrooms, employment of more teachers, providing school feeding programmes to address the issue of health and nutrition, and providing teaching, learning and play materials to schools. Competency Based Curriculum (CBC) has been implemented in all counties pre-primary schools though not all teachers have been trained on it due to COVID-19 pandemic. There is need to enhance the training for quality learning in pre-primary centred.

The Ministry of Education has developed National Pre-primary Education policy and Standard guidelines and disseminated to all counties, but some counties have not established the County Early Childhood Education committee to bring on board other key stakeholders who provide key services for holistic development of the child.

Recommendations

i. Integrate pre-primary data to NEMIS for evidence-based policy development and strategic decision making,
ii. Streamline funding for per-primary education across all counties,
iii. Improve health nutrition and protection, enhance coordination of pre-primary education programmes between National and County Governments, and
iv. Strengthen implementation of Quality Assurance and Standards in all counties which will also monitor the implementation of CBC.

5.2.3 Primary Education

i. There is a need for wide stakeholders' participation and political goodwill to implement recommendations of reports from consultants and task forces formed to undertake particular studies to inform decisions;
ii. Planned periodical training on governance and finances is a prerequisite for proper resource utilization by the primary schools. More school managers outsourced services to undertake financial records and documentation from point of no information;
iii. ICT integration in education is key to bridging the gap between access to education materials and is very helpful as seen during flexible learning methods employed during lock downs;
iv. Enhanced strategic interventions like sanitary provision, school feeding, primary infrastructure improvement played a big role in maintaining and attracting learners in school;
v. Low-cost boarding can enable learners in vulnerable areas and circumstances to escape cultural practices that hinder completion of primary education, hence improved PCR's;
vi. Proper project management skills are pre-required for the officials monitoring the projects and programmes for effective implementation and reporting; and
vii. Field offices need reliable facilitation to undertake rigorous inspection of projects using local expertise, which will lead to higher value for money disbursed to the schools for improving teaching and learning environment.

Recommendations

i. Multi-stake holder approach in data management in primary education to ensure increased net intake rate from Early Year Education (EYE) to primary education,
ii. Increase county, sub county and zonal dialogues on policy issues on education on children right to education and inclusivity.
iii. Revamp and train stakeholders on NEMIS digital capturing of leaners including boarders' special needs leaners, overall enrolment in NEMIS,
iv. Promote PPPs in Digital Leaning Device (DLP) provision under quality and relevant in ICT integration in teaching and learning,
v. Annual refresher of the trainings of school manager on management and accountability instead of one-off training after a long period, and
vi. Implement Differentiated Unit Cost (DUC) for capital and recurrent budget in primary education.

5.2.4 Secondary Education

COVID 19 pandemic indicated the vulnerability of secondary education provision, which places little emphasis on the use of online educating models that have an ability to eventually reduce education costs. This is so despite perennial underfunding on the provision of FDSE that has negatively impacted on equitable access to secondary education. The current financing models greatly contribute to inequity in financing of secondary. education. The model emphasis on equality even though learners' requirements differ depending regions, type of school, poverty and ability among others. Besides the resource allocation not matching the increase in population, infrastructure development is greatly under provided leading to congestion in secondary schools.

Infrastructure development is key in achievement of most of the objectives in secondary education and the need to determine the use of alternative building technologies that have the potential to reduce costs and achieve faster infrastructure development. In strategic planning, there is need to develop a result matrix that is outcome based and the same should be included as an appendix in the document for ease of implementation of the plan. In this regard, it is essential to have adequate data to enhance provision of quality secondary education. Easily available data is key in determining the level of performance in the implementation of NESSP. COVID-19 pandemic revealed skills and labour shortages in various sectors. strengthening skills, technological infrastructure, digital connectivity was brought into sharp focus by the pandemic.

Recommendations

i. Provide for the development of digital schools while enhancing ICT infrastructure in schools to offer online and distance learning in secondary education,
ii. Develop an equity-based financing model for secondary education. This is to ensure provision of adequate resources to sustain FDSE in terms of actual enrolment in schools and the expected increase from Out of School Children (OOSC) and double intake of 8.4.4 cohort and that of CBC cohort,
iii. Develop a framework for utilization of alternative building technologies in infrastructure development in secondary schools,
iv. Develop a result matrix that is based on outcomes with targets that are SMART for the remainder of the implementation of NESSP,
v. Fast-track the re-engineering of NEMIS and place more emphasis on NEMIS ICT infrastructure for full optimization of the system, and
vi. Recruit the necessary human resources.

5.2.5 Adult and Continuing Education

It is important for all senior education staff to be trained on key policy, planning and budget issues that are required for planning and also to be well equipped to be able to identify, and use relevant

policy, strategy planning documents. The problem of not meeting commitments under ACE was due to inadequate funds for ACE programs. It is important to make commitments on programmes that have been budgeted for.

Recommendations

i. On mass retirement of instructors without replacement, it is recommended that continuous engagements be held between the Ministry of Education and the Public Service Commission on the approved ACE staff establishment. Its also recommended that a framework on management of ACE instructors be developed,
ii. ACE curriculum reforms should be prioritised because the current curriculum does not address the needs of the 21st century out of school youth and adult learners. It is important to recognize the fact that adult learners require an accelerated and tailor-made curriculum specific to their learning needs. The reformed curriculum would provide equivalencies and linkages with the formal curriculum for accreditation purposes, and
iii. Strengthen linkages between various providers of ACE providers by reviving the Special Board of ACE as envisioned in the Basic Education Act, 2013.

5.2.6 Inclusive Education for Learners and Trainees with Disabilities at Basic Education

The emergence of COVID-19 pandemic disrupted programmes and activities that involve in- person gatherings such as meetings, conferences, seminars and workshops. In the remaining plan period, there is need to replan for use of alternative communication approaches to implement activities such as advocacy and awareness creation campaigns on inclusive education.

The shift in Government and partners funding priorities due COVID-19 pandemic significantly skewed the allocation of resources away from key priority programmes and activities that were planned for implementation. Most affected in the period were infrastructure development and upgrades, provision of equipment and assistive devices to SNE learners, institutions and EARCs, as well as the recruitment of qualified personnel for EARCs.

It was noted that the sub-sector had set many targets and activities; hence, in the remaining period, the targets will be rationalized to focus on those likely to be achieved in the short-term.

As the sector's state departments and agencies plan to deliver education services to the citizens as one, it is crucial to strengthen the leverage on the linkages, collaboration and partnerships that contributed to the achievements realized as at the midterm review.

Recommendations

i. Sub sector to revise and reprioritize key programme activities to be undertaken in the remaining plan period,
ii. Sub-sector to engage relevant GoK agencies for additional resources to enhance funding for SNE learners at primary level and SNE teacher trainees in TTCs infrastructure upgrade for increased access,
iii. Enhance SNE data capture and management through NEMIS and the proposed SNE data centre at KISE,
iv. Establish allocation for SNE infrastructure development and upgrade and capacity building to increase access and participation,
v. Strengthen Early Identification, functional assessment and intervention services which are key in achieving increased access and participation for learners and trainees with special needs and disabilities,

vi. Sub sector to revise and reprioritize key programme activities to be undertaken in the remaining plan period,
vii. Subsector to engage relevant GoK agencies for additional resources to enhance funding for SNE learners at primary level and SNE teacher trainees in TTCs infrastructure upgrade for increased access,
viii. Enhance SNE data capture and management through NEMIS and the proposed SNE data center at KISE,
ix. Establish allocation for SNE infrastructure development and upgrade and capacity building to increase access and participation, and
x. Strengthen Early Identification, functional assessment and intervention services, which are key in achieving increased access and participation for learners and trainees with special needs and disabilities.

5.2.7 Teacher education, professional development and management

i. Growth in enrolment and establishment of new schools led to expansion of teacher demand and therefore, it became increasingly difficult to fully address the shortages. This calls for a more comprehensive way of projecting teacher requirements,
ii. Use of a multi -sectoral approach proved effective as the sector was able to leverage on various skills from the different organizations in the sector,
iii. The review of the requirements for those applying to be trained as teachers has decreased the numbers applying for the training. This may require the sector to reconsider the academic requirements with a view to encouraging applicants,
iv. Programmes well planned are implemented within the set times,
v. Monitoring and supervision of the programmes is critical,
vi. Partnerships and collaborations are important in delivery of programmes,
vii. Funding from donor partners play a key role in enhancing successful implementation of programmes, and
viii. Work in synergies assist accomplishment of tasks.

Recommendations

i. It will be important to improve on the issue of having adequate funds for implementing programmes,
ii. The utilization of ICT in programme management and implementation should be prioritized, and
iii. The Development of Staffing Norms will aid in improving utilization hence the need to fast -track the finalization. Once the norms are finalized the framework on utilization will need to be developed.

5.2.8 Vocational and Technical Training

The sub-sector learnt the following lessons during the implementation of NESSEP 2018-2022: expansion and equipping TVET is necessary for increased access and participation as shown by the increase in enrolment; the rapidly changing technology in the industry also requires a corresponding change in the equipment in TVET. The sub-sector also learnt that cultural practices, economic activity, settlement patterns and other contextual factors of the catchment area impact on the enrolment of trainees besides building and equipping TVET. Moreover, disability friendly learning environment is a prerequisite for attaining inclusivity in TVET training.

Other lessons learnt include: internet connectivity and acquisition of modern ICT gadgets is necessary for ICT integration; linking planning to budgeting is necessary for the achievement of key priorities in the NESSEP as is shall ensure resource allocation. In addition to those, mapping of all TVET institutions is critical for planning purposes and implementation of interventions. Furthermore,

strengthening linkage with industry is necessary for CBET implementation. Finally, harmonization of mandate is key to address overlaps

Recommendations

i. Continue with expansion and equipping TVET institutions as well as equipping in order to enhance access,
ii. Strengthen collaboration between TVET and industry,
iii. Creating flexible learning approach responsive to various categories of trainees,
iv. Complete and implement TVET National Communication and Advocacy Strategy (NCAS) to ensure rebranding and repositioning of TVET,
v. Provide extra support to trainees in accessing technical and vocational training that include specialized training and equipment, disability mainstreaming and environmental modification,
vi. Put in place and implement affirmative action for marginalized and vulnerable groups,
vii. Enhance ICT uptake in TVET institutions through ensuring trainees and trainers have access to electricity, internet and laptops,
viii. Enhancing Collaboration between the training institutions and the labour market,
ix. Enhancing quality assurance of private TVET institutions,
x. Improve remote teaching and learning in Kenyan TVET institutions through investment in additional resources and development of adequate digital infrastructure,
xi. Develop a framework for engaging TVET training with industry,
xii. Recruit competent human resource in TVET,
xiii. Reskill and retool existing human resource in TVET,
xiv. Harmonization of Legal Frameworks governing TVET, and
xv. Enhance coordination between National and County Government on TVET matters.

5.2.9 University Sub-Sector

Lessons Learnt

There exist gender gaps across programs and governance issues still persist including Unit cost concerns. The staff establishment is skewed in favour of support service. The academic programmes need to be aligned with CBC for relevance.

Recommendations

i. Develop an annual implementation plan for the subsector,
ii. Strengthen coordination within Semi-autonomous Government Agencies,
iii. Carry out regular progress meetings to review the achievements and bottlenecks,
iv. Strengthen data collection on all priority areas to assess progress,
v. Enhance resource mobilization efforts to avail resources to achieve the NESSP targets,
vi. Invest in teaching staff particularly on STEM programmes by the government and developing partners,
vii. Come up with a sustainable finance policy in university education to address issues on DUC and what % the government should finance, and
viii. Train top management on why information management system is very key in university management.

5.2.10 Science Technology and Innovation Sub-Sector

During the implementation of the NESSP, a number of lessons were learnt. First, the setting of ST&I sub-sector NESSP targets and activities has guided the sub-sector in evaluating how it has progressed in achieving the NESSP objectives in the mid-term. Second, the NESSP mid-term review has also highlighted the fact that involvement of ST&I development partners from the planning stage can add

value to NESSP process in ST&I sub-sector. Third, it is now evident in the ST&I sub-sector that in NESSP planning, the proper alignment of the NESSP activities, outputs and output indicators with the proposed budgets and the determination of clear and comprehensive baselines, annual targets and strategic outcome indicators from the beginning would have greatly simplified measuring and reporting on the sub-sector progress. Finally, in future, ST&I Sub-sector NESSP reporting can be facilitated through the identification and training of NESSP focal points in each of the ST&I departments and agencies of the Ministry who will aid in the periodic progress reporting according to the guidelines and requirements of the NESSP Results Framework.

Recommendations

i. Put in place a multi-agency NESSP Coordination Unit at the MoE Headquarters, with representatives from all departments and agencies, and task it to follow-up the implementation of NESSP (2018-2022) in the remaining period,
ii. The ST&I sub-sector departments, agencies and institutions to come together and actively engage in the planning, implementation, monitoring, evaluation and reporting on NESSP,
iii. Include well-aligned NESSP outcome indicators so that the planned activities will deliver the expected outcomes,
iv. The ST&I departments and agencies to mobilize resources from the Exchequer and development partners to implement NESSP activities which have not yet been initiated or are incomplete, and
v. Build the capacity of ST&I Sub-sector Ministry's and agencies' staff on gender mainstreaming in ST&I to meet NESSP and Ministry targets.

5.2.11 Post-Training and Skills Development

The NESSP (2018-2022) was launched at a time when the State Department for Post-Training and Skills Management had not unpacked the mandate in Executive Order No. 1 of 2018 and therefore most activities were left out. Ever since, several activities have taken place. It has been found that work output is slowed by inadequate number of staff members, especially in the Technical Section, with only 4 members. The organizational structure had targeted 169 staff overall. It has been difficult to implement strategies for lack of the necessary policies and frameworks. Additionally, the Department needs to fast-track development of its legal documents. The National Skills Development Policy and National Skills Bill will be at the core of the implementation of programmes and activities in the Department. It has been established that the unemployment rate for youth is increasing at an alarming rate: now at 17.8%. Emerging issues, such as the COVID-19 pandemic, further exacerbated the unemployment rate. Affirmative Initiatives towards NEET were dismal and lacked sustainability. Skills development data and information were scanty and poorly shared. Fragmented data sets were available in Ministries, Departments, Counties and Agencies (MDCAs).

Recommendations

i. Fast track approval of the organizational structure from the Public Service Commission for the necessary human resource to execute its mandate,
ii. Follow up the Cabinet memoranda to pave way for the establishment of the National Skills Development Policy, National Skills Councils and Sector Specific Skills Councils,
iii. Enhance linkage and collaboration between the training institutions and labour market,
iv. Establish skills inventory to inform areas for skills training and tracer studies in order to track trained graduates in the labour market while giving feedback for review and improvement of training programmes and improving employability, and
v. Strengthen data management system and update periodically.

5.2.12 Quality Assurance and Standards

The survey that informed the development of IBQA gave an insight on more cost-effective ways of assuring quality through automated systems and efficiency through harmonized quality assurance processes. The development of the NEQASF and subsequent automation encountered major challenges that included lack of funds, which hindered the progress of planned activities such as institutionalizing the IBQA in the institutions of learning, the development of the IBQA guide and the training of stakeholders. The assessment of institutions of learning using the NEQASF was not conducted due to lack of funds as well as staff shortage. There is also acute shortage of QASOs to carry out quality assurance and standards in education institutions.

Recommendations

i. Source for funds to automate NEQASF,
ii. Automate IBQA to enhance effectiveness and efficiency of quality assurance process,
iii. Develop IBQA manual and train stakeholders to enhance quality assurance and maintenance of standards in education institutions,
iv. Recruit additional QASOs to improve quality assurance and maintenance of standards in education institutions,
v. Harmonize quality assurance and standards, and
vi. Strengthen mechanisms for enforcement of implementation of recommendations made.

5.2.13 Kenya National Qualifications Framework (KNQF)

The establishment and roll-out of the Kenya National Qualifications Framework (KNQF) came at an opportune time to coordinate and rationalize Kenya's education and training system. Kenya National Qualifications Authority commenced its operations during at the times NESSP 2018-2022 was being developed. During the period, KNQA thrived on collaboration and partnership with key stakeholders' sectors during development of policies for National qualification, benchmarking with established National qualifications globally enhanced governance and delivery of services and KNQA services on Recognition, Equation and Verifications (REV) increased as a result of awareness creation.

Recommendations

i. Develop policies which support implementation of National Qualifications Framework,
ii. Establish National Skills Council and Sector Specific Council Policy that will coordinate implementation of Occupational standards,
iii. Kenya National Qualifications Authority should carry out capacity building to all stakeholders on KNQF,
iv. Lobby for more funding from government to support implementation of KNQF, and
v. Education agencies should integrate national qualifications policies in their existing policies on qualifications.

5.2.14 Cross Cutting and Contemporary Issues

On mainstreaming cross-cutting and contemporary issues and values in education and training, some of the lessons learnt include the need to strengthen collaborations and linkages in mainstreaming pertinent and contemporary issues. The cross-cutting issues such as HIV and AIDS, climate change, radicalization, gender-mainstreaming, mentorship and national values are multi-sectoral in nature and thus there is need to create linkages with the relevant agencies and other stakeholders. Consequently, the shared knowledge and practice enhances integration of these issues into education. Cross-cutting and contemporary issues are enablers to realization of education objectives and form the basis for implementation of other education and training programmes. These issues are critical in the role of

education as an enabler to the achievement of the country's agenda of developing the human capital necessary for an industrialized middle-income economy. They also help in promoting governance and promotion of national values for a cohesive society.

Recommendations

From the challenges faced in integrating pertinent and contemporary issues in education and training, as well as the lessons learnt, the following are recommended priorities for the next implementation period of NESSP:

1. Mount programmes to address emerging issues such as increased violence in schools, teenage pregnancies, child labour, drug and substance abuse, HIV and AIDS and climate change.
2. Implement interventions on disaster-preparedness, response and recovery.
3. Strengthen the multi-sectoral approach in mainstreaming cross-cutting and contemporary issues.

5.3 Areas for further research

i. Evaluation of the impact of selected policies and legislations on enhancing service delivery in education and training.
ii. Causes of increased forms of school violence, radicalism, extremism and drug abuse.
iii. Establish health and nutrition unit cost per child to inform budget allocation.
iv. Analysis on the effectiveness of the implementation of selected policies and legislations.
v. Effect of the operationalization of NEMIS in basic education institution.
vi. The infrastructure status in public primary schools across the country (Classrooms and washrooms adequacy in public schools)
vii. Effect of school feeding program on educational outcomes at primary level in targeted regions.
viii. Effect of Edu Afya programme in enhancing access and equity to public secondary schools.
ix. Establish the Literacy levels to provide an accurate indication of the literacy status and life skills competency among the adult population.
x. The effect of teacher Distribution on student Performance in Primary and Secondary schools in Kenya
xi. Factor that influences Teacher Retention in Hard to staff areas in the Country.
xii. The Role of remunerative allowances in Teacher Retention.
xiii. Establish the reasons why CBET uptake in TVET institutions remains low.
xiv. Status of special need of student and staff in universities.
xv. Establish the degree of uptake of Open, Distance and E-learning in University Education.
xvi. Impact of the existing legal frameworks on achievement of Government effort in enhancing quality, access and relevance of education in Kenya.
xvii. Analysis of institutional mandates in the State Department for University Education and Research (SDUE&R) to establish overlaps and other challenge that are likely to impede service delivery.
viii. Determine the integration of digital technologies in the SDUE&R during the post COVID-19 recovery period and its effects on operational efficiency.
xix. Assessment of gender mainstreaming structures in ST&I in higher education and research institutions for equity and inclusivity.
xx. Effects of the proportion of technical staff and non-technical staff on the delivery of ST&I programmes, projects and activities in the SDUE&R.
xxi. Impact study on Qualification's framework and quality assurance of education and training, National Qualifications framework.
xxii. Lessons from countries that have an established NQF, and compilation of data on labour needs vs. acquired qualifications to inform skills management.

xiii. Impact of the existing legal frameworks on achievement of Government effort in enhancing quality, access and relevance of education in Kenya.
xxiv. A study on the impact of COVID-19 pandemic on education and training
xxv. Effectiveness of mainstreaming pertinent and contemporary issues in improving learning outcomes
xxvi. Study on the status of home schooling in Kenya.

ANNEX 1: SECTOR PRIORITY INTERVENTIONS FOR THE PERIOD 2021/2022 TO 2026/2027

Sub program	Prioritized interventions for the period 2021/2022 to 2026/2027		
	Short term	**Medium term**	**Long term**
Governance and Accountability	Complete pending policies, regulations and guidelines for implementation of CBC & CBA (guidelines for placement of Junior secondary education, guidance, counselling and coaching policy, Coordination framework for implementation of curriculum reforms, Guidelines for implementation of Basic Education under CBC, guidelines for transition in Basic and Teacher Education under CBC, Career Guidelines for Middle School, amendment of BEA) Strengthen data management system Conduct training needs Establish CBC coordination and Transition Committees Build the capacity of the CBC Coordination and Transition committees Conduct training need assessment (TNA) Develop a training plan Review relevant existing laws and frameworks for CBC implementation to address overlaps in mandates Build capacity of Heads of institutions on Instructional Leadership Disseminate existing policies and regulations Develop and implement a framework for collaborations, partnerships and linkages	Re-engineer NEMIS to school-based fit for 2-6-6-3 system. Develop 10 new policy documents, guidelines and manuals for effective implementation of CBC and CBA Develop training modules Conduct training for human resource to implement CBC and CBA Review relevant existing laws and frameworks to address overlaps and mandates Capacity build CEBs and BOMs to enhance oversight in schools Sensitize parents on parental engagement, community service learning and value-based education Conduct National M&E baseline survey on status of CBC implementation Monitor the status of policy implementation and enforcement of their implementation Conduct education sector research to inform policy and research-based interventions in education management Evaluate the effectiveness of existing policies in enhancing education service delivery. Assessment and registration of education institutions in refugee camps and settlements. Develop an online platform for M&E reporting on implementation of curriculum reforms Develop Framework for Knowledge Management under the CBC Conduct Regional and National Education Quality Dialogues on the curriculum reforms.	i.Review of existing policies to ensure they accommodate Parental Empowerment and Engagement (PEE), Value-Based Education (VBE) and Community Service Learning (CSL) Programmes for implementation of CBC and CBA reforms i.Review and implement Governance and Accountability Action Plan to promote efficiency and effective resource utilization i.Establish a mechanism for Inclusion of data for refugees and asylum-seekers, including those in camps, in the national education data management and statistics .Develop a framework for capacity building of Education Stakeholders .Develop a resource mobilization strategy i.Establish Kenya school of Education i.Develop and implement transitional planning and guidelines, including on financing, to align education service delivery in camp schools and progressively include refugees in the national education system.

Sub program	Prioritized interventions for the period 2021/2022 to 2026/2027		
	Short term	**Medium term**	**Long term**
	with relevant stakeholders. Develop capacity building framework for education officers on the effective implementation of CBC and CBA Develop training program on career guidance services for careers teachers for effective implementation of career guidance CBC	Hold dialogue forums on curriculum reforms with TVET and universities Carry out research on curriculum reforms implementation Develop Framework for Collaborations and Partnerships on Sports and Talent Development in Basic Education, under the reformed curriculum. Develop Framework for infrastructure management and sharing among the Primary, Secondary schools and TVET institutions. Develop Framework for Collaborations and Partnerships on provision of Secondary education bursary and scholarship programmes, to address equity and access in the implementation of curriculum reforms. Develop and implement transitional planning and guidelines, including on financing, to align education service delivery in camp schools and progressively include refugees in the national education system. Develop Partnership and Principles Agreement	
Pre-Primary Education	Provide school feeding programme for pre-primary learners in all counties. Train pre-primary school-teachers, county ECD officers and other curriculum implementers on CBC. Establish County Early Childhood Education Committees and BOMs	Undertake mapping exercise for existing pre-primary schools Sensitize stakeholders on the importance of pre-primary education in areas with low enrolment across all counties. Develop and implement a capacity building program for pre-primary instructional support officers. Build capacity of pre-primary education Centre managers on governance issues	i.Strengthen implementation of Quality Assurance to enhance M&E in CBC. ii.Establish a framework for coordination between the National and Counties, and strengthen linkages, collaboration and governance. iii.Digitize and disseminate all content for pre primary

Sub program	Prioritized interventions for the period 2021/2022 to 2026/2027		
	Short term	**Medium term**	**Long term**
	for pre-primary education. Orientate ECD trainers on the new Teacher Education curriculum in partnership with TSC. Develop a framework for parental engagement and empowerment. Mainstream Pre-primary teacher training program in Diploma teacher training colleges. Adapt the competency-based curriculum instructional materials for inclusive. Build capacity of pre-primary school teachers on CBA. Orientate ECD trainers on the new Teacher Education curriculum in partnership with TSC. Develop electronic curriculum support materials and disseminate through EDU TV, Radio and Kenya Education Cloud (KEC).	Develop and implement a coordination framework between levels of government Carry out capacity building to the curriculum implementers for effective implementation of CBC in pre-primary education Carry out monitoring and evaluation on implementation of CBC in pre-primary Develop electronic curriculum support materials and disseminate through EDU TV, Radio and Kenya Education Cloud (KEC)	iv.Develop electronic curriculum support materials and disseminate through EDU TV and Radio v.Review the curriculum for pre-primary education. Review KSRAT tool.
Primary Education	Develop (Finalize) the Competency Based Assessment (CBA) framework for basic education Pilot Grade 6 assessment in 250 primary schools Conduct School Based Assessments at Grade 4, 5 and 6 in all primary schools Procure CBC textbooks in 12 learning areas for Grade 6. Establish Smart Classrooms in 1000 primary schools for ICT integration in teaching and learning.	Train Head teachers on NEMIS data input and utilization in primary (*Move to Governance*) Pilot classroom based formative Assessment tools Review CBA frameworks for Basic Education Review (*Evaluate*) the Curriculum for primary education after the 1st complete primary cycle. Establish and maintain a web-based portal to facilitate access to formative assessment at school level Provide instructional materials to all primary schools including camp-based schools	Construct and equip STEM workshops in 32 primary teacher training colleges Construct and equip Art/Music room in 32 primary teachers' training colleges schools Construct and equip General science workshop in 23,000 primary educations Construct and equip Art/Music room in 23,000 primary schools Establish and implement a Differentiated Unit Cost (DUC) in primary education. (*Consider*

Sub program	Prioritized interventions for the period 2021/2022 to 2026/2027		
	Short term	**Medium term**	**Long term**
	Conduct annual Kenya Early Years Assessment (KEYA) at grade 3 and Primary School Education Assessment (PSEA) at grade 6 Monitoring of implementation of CBC Grade 5 curriculum (*G 6 or 5*) Enhance School Meals Program (SMP) in primary education to increase access and equity Enhance Primary schools' infrastructure Improvement for conducive learning environment Enhance Sanitary Pads provision to primary school girls for increased retention	Enhance (*Mainstream*) the TUSOME/EGMA Model to promote literacy and numeracy in primary education Promote early identification of talents along arts and sports, social sciences and STEM (be specific) Finalize and train stakeholders on the Quality Assurance Framework Review and Capacity build BoMs and school administrators in all the registered schools in refugee camps in management and governance	*using equity-based financing*) Develop and implement Computer Based Testing (CBT) Conduct evaluation of the effectiveness of CBA in the education sector Develop and distribute science kits for primary schools Establish climate proof water infrastructure for water harvesting Establish community empowerment programmes to enhance economic ability of parents to enable them support learners by providing basic needs Develop a framework for Public Private Partnerships between Government and Corporate Entities for Corporate Social Responsibilities (CSR's).(*Move to Medium term*)
Secondary Education	Undertake a mapping exercise for existing secondary schools Develop more infrastructure to enhance the learning places for the double intake in 2023 and 2024 and also enhance spaces available for the ever-increasing population including in refugee camps Develop equity-based unit cost for secondary education Adapt existing infrastructure to facilitate	Build capacity for curriculum implementers (head teachers, teachers, teacher trainers and field officers) in readiness for implementation of CBC Roll out CBC in Junior and senior secondary education Provide more human resources Develop a framework to guide education interventions in vulnerable areas; Establish a fund to support learners from vulnerable backgrounds; Develop guidelines on identification, placement and	A school infrastructure investment plan that defines a costed minimum essential package that each school must meet Digitize curriculum support materials for secondary education level Develop and disseminate Electronic and non-electronic curriculum support materials for Grade 10-12

Sub program	Prioritized interventions for the period 2021/2022 to 2026/2027		
	Short term	**Medium term**	**Long term**
	inclusive education in secondary schools Sensitize communities on cultural attitudes hindering access to secondary education, particularly for girls; Enhance the management of National Examinations in Secondary education; Enhance ICT integration through capacity build capacity, development of a standard monitoring and evaluation framework and provision of e-content for secondary education Develop guideline for transition and criteria for placement to junior secondary Build capacity for curriculum implementers (head teachers, teachers, teacher trainers and field officers) in readiness for implementation of CBC in Grade 7	development of gifted, and talented students Build capacity of technical officers at KNEC on conceptualization, design and implementation of CBA for Secondary Education Review the Competency Based Assessment (CBA) Framework for basic education; Provide Instructional materials to secondary schools Undertake Stakeholders' engagement on implementation of CBC Develop and disseminate Electronic and non-electronic curriculum support materials for Grade 7-9 Train stakeholders on the modified cascade model and a mobile based teachers' peer learning strategy	Develop regulations for implementation of the 2:6:3:3 structure of basic education
Adult and Continuing Education	Include a module for ACE in NEMIS to enhance data management for decision making across all levels. Development and provision of teaching and learning materials Application of the lessons learnt to the remainder of the Plan's implementation period to avoid pitfalls. Sensitization of community on the importance of ACE. Review the ACE/APBET policy guidelines in view of changing needs of the 21st century adult learner.	Strengthen coordination and linkages between Formal, Non-Formal and TVET institutions Establishment and refurbishment of Community Learning Resource Centres (CLRCs) to create a literate learning environment.	Undertake Kenya Adult Literacy Survey (KALS)

Sub program	Prioritized interventions for the period 2021/2022 to 2026/2027		
	Short term	**Medium term**	**Long term**
Inclusive education for learners and trainees	Enhance SNE disability-specific data capture and management for pre-primary, primary, secondary, teacher training and functional assessment through NEMIS Establish a Data Centre at KISE Recruit/deploy EARC qualified personnel for effective functional assessment Capacity building of EARC personnel on inclusive education and functional assessment Curriculum adaptation & curriculum support materials development and adaptation at KICD Capacity building of teachers and field officers on adapted curriculum and curriculum support materials. Complete the on-going upgrade of the two regional EARC Centres in Nairobi and Garissa through UNICEF support to Centres of excellence in functional assessment Expand and improve infrastructure in SNE schools in tandem with the progressive competency-based curriculum implementation requirements Seek for enhanced Special Needs Education funding through GOK budget process guided by disability category based differentiated unit cost (DUC)	Engage relevant GOK budget-making agencies for additional resources to enhance SNE learner funding at primary level Carry out infrastructure upgrade in SNE primary and secondary schools to enhance access for SNE Learners. Conduct capacity building of teachers, EARC personnel and Education officials on functional assessment and inclusive education. Upgrade and equip five regional EARCS. Develop Policy on education and training of gifted and Talented learners Carry out survey on children with disabilities, both in and out of school Conduct a survey to determine inclusion-readiness and gaps in primary and secondary schools. Provision of learning resources, assistive technology, Assistive devices to SNE learners & essential Equipment to SNE schools Review the functional assessment tools used by EARCs Develop guidelines and curriculum for provision of home-based education and support its implementation Develop guidelines for recruitment, training and deployment of LSAs in inclusive schools Recruit, train and deploy LSAs in inclusive schools; Train 9,000 teachers on adapted digital content and assistive technology Train 171 teachers in model inclusive schools in Kenya Sign Language	Establish, equip and staff a National Academy for the Gifted and Talented. Upgrade and equip a workshop at KISE for production of assistive devices, technologies and materials Develop and distribute IEC materials on inclusive education and training Develop a framework for partnerships in the provision of support services to learners with Special Needs & Disabilities Sensitize County education boards, BoMs, and QAS officers on inclusive education Sensitize parents of learners with disabilities, communities and other stakeholders on IE for learners with special needs and disabilities Upgrade infrastructure and equip 50 EARCs.

Sub program	Prioritized interventions for the period 2021/2022 to 2026/2027		
	Short term	**Medium term**	**Long term**
	Dissemination of Sector policy for learners and trainees with disabilities Advocacy, sensitization and public awareness creation on inclusive education using relevant media Complete equipping of Referral Psycho-Educational and Placement Centre at Kenya Institute of Special Education (KISE) Train 700 primary school teachers on SNE at diploma level Rehabilitation of 1000 learners with disabilities	Train 500 special needs trainers and 140 special needs lecturers in TVET and universities respectively Provide instructional materials to 334 inclusive regular schools	
Teacher Education, Professional Development and Management	Recruitment of additional teachers to alleviate existing teacher shortages in order to improve Pupil Teacher Ratio at primary schools and to cater for 100% transition. Finalization of staffing Norms and the Development of policy guidelines on teacher utilization Training and capacity building on CBC, CBA and ICT integration to equip teacher trainees, Principals and other curriculum implementers. Carry out rehabilitation of old and dilapidated teacher training colleges. Monitoring of college programmes and activities to ensure they are on course and take corrective action where necessary. Roll out of SBTSS to all teachers	Develop policy and guidelines on teacher education to guide on programmes and activities in teacher training colleges. Develop system for projecting and forecasting teacher demand and supply through the use of simulation model Improving data management to monitor distribution and utilization and Performance of teachers Reorientation of Primary school Teachers to be able to teach in lower secondary school level Evaluate the SBTSS process to determine its viability Review TPAD Tools to align them with CBC rehabilitate physical facilities in old and dilapidated TTCs Increase infrastructure in new TTCs to alleviate the shortage Developing a monitoring framework for teacher education and teaching service. Capacity building and in-service training of refugee teachers. Develop guidelines for the recognition, registration and	Review policy frameworks to guide in the selection and placement of ECDE and Primary teacher trainees Carry out research to determine the impact of remunerative allowances on teacher retention in the hard to staff regions and recommend appropriate rates Undertake evaluation of the CBC/CBA Trainings Establishing and Strengthening of ICT integration in teaching and learning by connecting TTCs with internet to support blended learning and enhancing implementation of Communities of Practice (COP) to promote sharing of ideas information and collaboration among the Teacher Training Colleges and schools

Sub program	Prioritized interventions for the period 2021/2022 to 2026/2027		
	Short term	**Medium term**	**Long term**
	Establish a mechanism for the recruitment of qualified teachers in refugee camp schools for pre-primary, primary and secondary schools. Assess the old TTCs to establish the current status of infrastructure and recommend intervention measures Strengthen Governance and Management of resources in teacher training colleges by building the capacity of principals and finance officers Strengthen the upgrade of certificate trained ECDE and P1 teachers to Diploma in Primary and Early childhood Teacher Education to align the trainees to CBC	recruitment of qualified refugee teachers. Provide mentorship and support to teacher trainers, to help them identify and nurture the gifted and talented trainees	Carry out rehabilitation of old and dilapidated teacher training colleges Provision of unavailable infrastructure in the new TTCs through additional budgetary allocation by National Treasury and Partners. Construct and modernize learning resource centres in TTCs to align them to Competency Based Teacher Education Review the upgrade of certificate trained ECDE and P1 teachers to Diploma in Primary and Early childhood Teacher Education to ensure effective implementation of the programme
Vocational and Technical Training	Rebrand and reposition TVET through advocacy campaigns Operationalize the completed TVCs under the phase of 30 Roll out of TVET MIS Capacity build Principals and Councils/Boards of institutions on Leadership and Governance Provide capitation grants	Finalize TVET blueprint Capacity building of trainers on CBET delivery at all levels in TVET Recruitment of trainers to improve staffing levels at TVET Public Sensitization on opportunities in CBET training Institutionalize quality assurance and standards in TVET Develop and implement Differentiated Unit cost Construct and equip TVET institutions phase of 30 Develop a framework for collaborations between levels of Government to improve TVET delivery Equip TVET institution with adaptive and assistive devices Conduct public TVET fairs, technology contests and outreach programs	Implement TVET blueprint Implement the TVET national Communication and Advocacy Strategy Development of a policy on equity and Inclusivity in TVET Mainstream Special needs in TVET Operationalize T-VET Funding Board Develop gender mainstreaming guidelines in TVET as per the gender policy in TVET Implement ODeL and blended learning/assessment in TVET Equip TVET institutions Construction and expansion of TVCs

Sub program	Prioritized interventions for the period 2021/2022 to 2026/2027		
	Short term	**Medium term**	**Long term**
		Review and implement policy on ICT integration in TVET	Equip TVET institutions with adaptive and assistive devices Establish a National TVET Academy for gifted and talented
University Education	Finalize sustainable financing policy for university education Review 100 academic programmes Conduct 24 human resource audits in public universities. Conduct M & E for public universities to provide a baseline for the sector Build the capacity of academic staff in public universities in SET Programmes Establish a project implementation Unit at the state department for university education	Conduct an assessment of the status of infrastructure in public universities Establish the Kenya Advanced Institute for Science and Technology Upgrade infrastructure in all the new public universities Upgrade infrastructure in existing universities to achieve the required minimum standards Construct multi-purpose student accommodation and welfare facilities in all public universities Finalize a guidance and counselling programme for universities Develop criteria for placing students from alternative pathways to government sponsored Programmes in Universities Establishment of open university Increase capitation to Government sponsored students. Develop a policy for SNE in public universities Upgrade university facilities to accommodate students with special needs Build capacity of university staff in delivery of services to students with SN&D Provide 4000 Masters and PhD scholarships annually targeting university academic staff; Recruit 1000 postgraduate students into the teaching assistant's programme Build capacity of academic staff in pedagogy and modern	Develop an incentive framework for private sector investment in University Education Apply affirmative action in placement of more students with disabilities and minority groups in University in Programmes where there is under representation Establishment Science and Technology Parks Identify and establish 5 centres of excellence in critical areas of the economy Establish the Open University of Kenya

Sub program	Prioritized interventions for the period 2021/2022 to 2026/2027		
	Short term	**Medium term**	**Long term**
		delivery modes for international Competitiveness Develop national human resource management guidelines for university staff Review the human resource management policies in public universities, including Codes of Conduct for personnel Develop exchange Programmes for academic staff Finalize and implement human resource policy for university education and look at the % of Academic staff versus Non-academic staff. Conduct skills inventory survey and tracer studies Provide competitive research grants in all public universities based on each institution's recurrent budget; and Develop an incentive scheme to recognise universities and individual researchers who excel in research, publications, innovations and patents, and community service Establish Higher education information management system Establish integrated Payroll Personnel Database (IPPD) for all universities Develop and implement a training programme on corporate governance targeting council members	
Science, Technology and Innovation	Train and support research personnel in ST&I institutions. Identify innovation and create modalities for commercialization in partnership with innovation and incubation centres. Conduct Innovation surveys.	Conduct an R&D indicators survey. Review and harmonize the existing legal and regulatory framework for ST&I. Establish an integrated knowledge management information system to inform the country on the ST&I profile. Develop an incentive framework for private sector investment in R&D.	Recruit 284 technical staff to strengthen the state agencies supporting ST&I. Complete at least the three prioritized laboratories at the National Physical Science Research Laboratories at Konza Technopolis.

Sub program	Prioritized interventions for the period 2021/2022 to 2026/2027		
	Short term	**Medium term**	**Long term**
	Conduct the STEM Mentorship Programme for secondary school students.	Conduct gender assessment of policy actions, financial resources and gender-responsive budgeting. Complete the survey to establish the status of ST&I infrastructure in public universities, research institutions and national polytechnics. Develop and implement a framework for sharing R&D infrastructure amongst institutions. Conduct a National Skills Inventory and Audit for ST&I. Publish biennial ST&I indices reports. Recruit 284 technical staff to strengthen the state agencies supporting ST&I. Complete at least the three prioritized laboratories at the National Physical Science Research Laboratories at Konza Technopolis. Complete the two Science Parks at Dedan Kimathi University of Technology and Konza Technopolis. Establish, update and maintain a National Science, Technology and Innovation Observatory.	Complete the two Science Parks at Dedan Kimathi University of Technology and Konza Technopolis. Establish, update and maintain a National Science, Technology and Innovation Observatory.
Post-Training and Skills Development	Development of the National skills development policy Development of the National Skills Management Information System Development of a framework to create linkage and enhance collaboration between the training institutions and labour market	Enhance the linkage and collaboration between the training institutions and labour market will be enhanced in the medium term Establish Information Management Systems like Skills Mapping via National Skills Inventory, National Industry mapping database	Development and improvement of the skills of the Kenyan workforce and to integrate those strategies within the National Qualification Framework; Establishment of sector specific skill councils; Establishment and management of institutional framework for linking industry, skills development and training;

Sub program	Prioritized interventions for the period 2021/2022 to 2026/2027		
	Short term	**Medium term**	**Long term**
			Implementation of industrial attachment policy; Harmonization of skill training at all levels of training; Development and implementation of industry-entrepreneurship linkages; Creation and management of an employment database system with linkage to all cadres of all graduates and jobs in the market; Registration and approval of professional bodies; Assessing industrial training,
Quality Assurance and Standards	Automate IBQA to enhance effectiveness and efficiency of school self-assessment Develop IBQA guide and train stakeholders to enhance quality assurance and maintenance of standards in education institutions Assess schools (pre-primary, Primary, Secondary, TTCs, and ACE centres).	Automate NEQASF. Recruit additional QASOs to improve quality assurance and maintenance of standards in education institutions.	Review NEQASF to align to CBC Develop and disseminate annual national QA Report on status of education SQA
Kenya National Qualifications Framework	National roll-out of Recognition of Prior Learning (RPL) Increase awareness of the Kenya National Qualifications Framework (KNQF).	Implement accreditation processes by accrediting Qualifications Awarding Institutions (QAIs) to award National Qualifications and Part Qualifications. Implement registration processes by registering National Qualifications and Part Qualifications awarded by	Develop and implement regulation of the issuance of certificates by awarding bodies/ agencies. Establish and maintain Career Advice Service Centre

Sub program	Prioritized interventions for the period 2021/2022 to 2026/2027		
	Short term	**Medium term**	**Long term**
		Qualifications Awarding Institutions (QAIs) National roll out of Credit Accumulations and Transfer Policy Develop and implement guidelines for regulatory and curricula development institutions to set and implement appropriate curricular designs and curriculum delivery systems for meeting national qualification standards.	
Cross Cutting and Contemporary Issues	Develop programmes to address pertinent and contemporary issues such as increased violence in schools, teenage pregnancies, child labour, drug and substance abuse, radicalization, Gender-Based Violence and climate change among others. Develop and implement interventions on disaster-preparedness, response and recovery. Develop and implement a multi- sectoral framework for addressing pertinent and contemporary issues. Implement interventions to provide for mental and psychosocial support for learners in refugee and host communities.	Review the PCIs programmes to incorporate emerging issues. Integrate value-based education in relation to PCIs. Disseminate policies, guidelines and manuals that address PCIs. Sensitize education stakeholders on disaster-preparedness, response and recovery.	Develop and implement a parental engagement framework in PCIs interventions. Review policies related to PCIs to align with CBC and CBA reforms. Establish a multi-sectoral coordination unit to respond to challenges affecting learners.

ANNEX II: ANALYSIS OF ACTUAL RECURRENT EXPENDITURE (AMOUNT KSHMILLION)

Economic Classification	APPROVED BUDGET			ACTUAL EXPENDITURE		
	2018/19	2019/20	2020/21	2018/19	2019/20	2020/21
Basic Education and Early Learning						
Gross	88,395	89,738	88,224	87,982	84,092	86,218
AIA	1,433	1,433	1,433	1,432	1,433	1,433
NET	86,962	88,305	86,791	86,550	82,659	84,785
Compensation to Employees	3,905	3,844	3,778	3,832	3,754	3,722
Transfers	19,690	21,550	19,839	18,636	16,944	18,257
Other Recurrent	64,800	64,344	64,607	65,514	63,354	64,239
Vocational and Technical Training						
Gross	**8,957**	**16,806**	**18,392**	**7,764**	**12,508**	**15,210**
AIA	20	3,435	4,693	18	2,744	2,321
Net	**8,937**	**13,371**	**13,699**	**7,746**	**9,764**	**12,889**
Compensation to Employees	3,822	5,330	6,362	3,535	5,081	6,222
Transfers	4,921	11,360	11,930	4,051	7,343	8,922
Other Recurrent	194	115	100	160	83	66
University Education and Research						
Gross	100,471	116,933	87,836	91,659	96,830	78,685
AIA	47,568	50,415	32,472	38,797	33,976	23,344
Net	52,904	66,518	55,364	52,861	62,854	55,342
Compensation to Employees	198	218	211	193	218	206
Transfers	90,391	99,943	73,227	82,204	86,234	67,766
Other Recurrent	9,882	16,772	14,398	9,262	10,378	10,713
Post-Training and Skills Development						
Gross	**75**	**122**	**126**	**56**	**114**	**122**
AIA	0	0	0	0	0	0
NET	75	122	126	56	114	122
Compensation to Employees	19	63	71	16	57	70
Transfers	0	0	0	0	0	0
Other Recurrent	**56**	**59**	**55**	**40**	**57**	**52**
Teachers Service Commission						
Gross	241,109	255,951	274,950	240,772	255,803	274,534
AIA	517	517	547	517	517	547
NET	240,592	255,434	274,403	240,255	255,286	273,987
Compensation to Employees	239,152	254,512	273,125	239,171	254,512	273,125
Transfers						
Other Recurrent	1,957	1,439	1,825	1,601	1,291	1,409

Development

ANALYSIS OF DEVELOPMENT APPROVED BUDGET VS ACTUAL EXPENDITURE						
	Approved Budget			Actual Expenditure		
	2018/19	2019/20	2020/21	2018/19	2019/20	2020/21
Basic Education and early Learning						
Gross	**10,443**	**4,581**	**8,931**	**7,389**	**3,420**	**5,905**
GoK	4,988	3,142	4,199	5,839	1,661	4,191
Loans	2,512	657	2,609	97	1,432	843
Grants	2,943	782	2,123	1,453	327	871
Local AIA						
Local AIA	-		-	-	-	
Vocational and Technical Training						
Gross	**11,612**	**6,946**	**6,294**	**9,013**	**5,336**	**5,328**
GoK	4,618	3,708	2,974	3,050	2,198	2,955
Loans	6,940	3,192	3,275	5,945	3,120	2,344
Grants	54	47	45	19	17	29
Local AIA						
University Education and Research						
Gross	**11,389**	**6,623**	**4,363**	**10,154**	**6,304**	**3,968**
GoK	8,899	5,859	2,718	7,686	5,754	2,566
Loans	2,490	764	1,645	2,468	550	1,402
Grants	-	-	-	-	-	
Local AIA	-	-	-	-	-	
Teachers Service Commission						
Gross	**40**	**400**	**240**	**36**	**290**	**117**
GoK	40			22		0
Loans		400	200	14	290	97
Grants						
Local AIA			40			20

ANNEX III: NESSP 2018-2022 RESULTS MATRIX OF FINAL OUTCOMES

Indicator	2017/2018	2018/2019		2019/2020		2020/2021		2021/2022	2022/2023	Source
	Baseline value	Target	Actual value	Target	Actual value	Target	Actual value	Target	Target	
1. Governance & Accountability										
Policy Priority 1 Outcome: Efficiency and effectiveness in the delivery of education services enhanced										
Annual statistical reports include indicators for Pre-primary, Basic education, TVET and University levels	0	1	0	-1	1	-1	-	1	1	MOE Data
Review's education sector structures, policy and legal frameworks and functional analysis	N/A	N/A	N/A	1	1	N/A		N/A	MOE Structure Developed	MOE HRMD
NEMIS Operationalized in Pre-Primary	N/A	N/A		10	0.2	20	0.22	30	40	NEMIS Report
NEMIS Operationalized in Primary	N/A	100	34	100	34	100	34	100	100	NEMIS Report
NEMIS Operationalized in Secondary	N/A	100	100	100	100	100	100	100	100	NEMIS Report
NEMIS Operationalized in Tertiary and University	N/A									
Policy Priority 2 Outcome: Enhanced policy formulation and Implementation for effective education service delivery										
Percentage of Policies, legislations and regulations proposed in the NESSP 2018-2022 issued	3 % (1)	N/A	6% (2)	30	18% (6)	30	12% (4)	40	100 % (33)	Policy Report
Percentage level of framework to enhance collaborations and linkages in education and training	N/A	N/A	N/A	20	20	30	20	50	100%	Collaborations and Partnerships Reports
Policy Priority 3 Outcome: a framework for implementation of the NESSP 2018-2022 established										
Annual M&E report on NESSP implementation	N/A	1	1	1		1		1	1	M&E reports
2.Pre-Primary Education										
Policy Priority 1 Outcome: access and participation rate in competence-based learning for children aged between 4 to 5 years improved										

Indicator	2017/2018	2018/2019		2019/2020		2020/2021		2021/2022	2022/2023	Source
	Baseline value	Target	Actual value	Target	Actual value	Target	Actual value	Target	Target	
Pre-Primary Gross Enrolment Rate (GER)	77.1	77.5	78.4	80	109.4	81	-	82	83	Statistical booklet 2019
Pre-primary Net Enrolment Rate (NER)	76.9	75.5	77.2	77.5	-	78.0	-	78.5	80	Statistical booklet 2019
Transition Rate (Pre-primary to primary)	X	x	x	x	30.60	50.0		100	100	NEMIS Statistical booklet 2019
Pre-Primary Gender Parity Index (GPI)	0.96	1	0.96	1	0.986	1		1	1	Statistical Booklet 2019
Net Intake Rate (NIR) into primary education	X	x	x	x	54.54%	60.0 %		65.0%	70.0%	Statistical booklet 2019
Policy Priority 2 Outcome: quality and relevance of pre-primary education enhanced										
Measure of learning, if available (KSRAT)[MBZ1[1]]										
Percentage of pre-primary schools delivering competency-based curriculum	X	x	x	100	100	100	100	100	100	MOE reports
Policy Priority 3 Outcome: governance and accountability in management of pre-primary education services improved										
Multi-sectoral approach in governance, coordination, linkages and collaboration with pre-primary service providers developed	N/A	1	0	1	0	1	0	1		MOE reports
3.Primary Education										
Policy Priority 1 Outcome: access and participation in primary education improved										
Primary Gross Enrolment Rate (GER)	104.0	100	104.0	100	99.6	100	99.6	100	100	Statistical booklet 2019
Primary Net Enrolment Rate (NER)	91.2	93	92.5	92.8	-	92.9	-	93.0	93.1	Statistical booklet 2019
Pupil Completion Rate (PCR)	84	100	84.2	100	85.4	100	-	100	100	Economic survey 2020
Policy Priority 2 Outcome: equity, inclusivity and safety in primary education enhanced across the country										

Indicator	2017/2018	2018/2019		2019/2020		2020/2021		2021/2022	2022/2023	Source
	Baseline value	Target	Actual value	Target	Actual value	Target	Actual value	Target	Target	
Share of SNE enrolment in primary education	1.2%	1.2%	1.36%	2.2%	1.6%	3.1%		4.1%	5%	Simulation model for the targets Statistical booklet 2019
Primary Gender Parity Index (GPI)	0.965	1	0.965	1	0.972	1		1	1	Economic survey 2019 Statistical booklet 2019
Rural to urban ratio of enrolment in primary	N/A	Data not available								Kenya Demographic Health Survey
Primary NER in conflict prone and vulnerable regions	Not available									Kenya Demographic Health Survey
Number of learners receiving day meals in primary schools	1.5M	1.5M	1.48	1.6M	1.51	1.7M	-	1.8M	1.9M	
Percentage enrolment in Low-Cost Boarding Schools	111,953 (1.27%)	112,028	115,170 (1.3%)	115,100	84,786 (1%)	122,200	83,146 (1%)	129300	135,0000	MoE/DPE
Number of improved infrastructure projects in public primary schools	277	1075	304	1075	211	1075	214	1075	1075	DPE-Administrative data
Informed data on primary schools' infrastructure needs (% completion)	N/A	-	-	1	95	-	-	-	-	Task force ELBE infrastructure data draft report
Policy Priority 3 Outcome: quality and relevance of primary education enhanced										
Proportion of primary schools With DLP Devices (%)	18,701	21729	18,701 (86.1%)	22793	19666 (94.4%)	22873		22998	22998	ICTA-DLP STATUS REPORT- 2017 & 2019
Textbook Pupil Ratio (TPR) (Lower Primary)	N/A	1	0.97	1	0.96	1	0.97	1	1	Statistical Booklet 2019
Pupil Teacher Ratio (PTR) in public schools	32:1	42:1	32:1	42:1	39:1	42:1		42:1	42:1	Statistical Booklet 2019
Policy Priority 4 Outcome: school level governance and accountability in primary schools improved										

Indicator	2017/2018	2018/2019		2019/2020		2020/2021		2021/2022	2022/2023	Source
	Baseline value	Target	Actual value	Target	Actual value	Target	Actual value	Target	Target	
69,000 primary schools BoM's and stakeholders trained in public finance management	N/A	13800	-	13800	-	13800	68,994	13800	13800	Capitation and other grants training report
Policy Priority 5 Outcome: national cohesion and national values enhanced through literacy										
Percentage of counties covered by the National Volunteer Assistance Programme (VGA's)	20 (42.5%)	25 (53.2 %)	20 (42.5%)	30 (63.8 %)	22 (46.8%)	35 (75%)	22 (46.8%)	40 (85.1%)	47 (100%)	Administrative Data-G-United
4.Secondary Education										
Policy Priority 1 Outcome: participation in secondary education improved										
Secondary GER	68.5	70.6	70.3	74	71.2	77		80	83	Statistical booklet 2019
Secondary NER	51.1	58	53.2	69		75		80	86	Statistical booklet 2019
Primary to Secondary Transition Rate (PSTR)	83.1	82.8	83.3	84.1	85.5	85.4		86.7	88	Statistical Booklet 2019 Economic survey 2020
Policy Priority 2 Outcome: disparities in access to secondary education reduced										
Female/male ratio of secondary completion rate	0.91	0.94	0.91	0.96	0.97	0.98		1.0		Economic Survey
Proportion of learners with special needs in public schools	0.16%	0.18%	0.18%	0.20	0.16%			0.22%	0,24%	Statistical Booklet 2019
Secondary Completion Rate	85.97	88	81.56	91	94.16	94		97	100	Economic Survey
Rural to urban ratio of enrolment in secondary	No Data									Kenya Demographic Health Survey
Policy Priority 3 Outcome: learning outcomes in secondary schools improved										
Proportion of secondary schools integrating ICT in education	0.32	0.35	0.32	0.45	0.465	0.55		0.65	0.75	MOE data

Indicator	2017/2018	2018/2019		2019/2020		2020/2021		2021/2022	2022/2023	Source
	Baseline value	Target	Actual value	Target	Actual value	Target	Actual value	Target	Target	
Percentage of learners scoring C+ in national examinations	11.39	13.40	13.90	15.40	18.14	17.4		19.4	21.4	Statistical Booklet 2019
Policy Priority 4 Outcome: school level governance and accountability in secondary schools improved										
Proportion of secondary schools with BOM that received training in public financial management topics	N/A	0.2		0.4		0.6		0.8	1	MOE data
Percentage of schools receiving unqualified audit reports	N/A	0.25		0.35		0.45		0.55	0.65	DSA
5.Adult and continuing education										
Policy Priority 1 Outcome: Increase access and retention in ACE programmes.										
Percentage growth in Enrolment of Adult and continuing Education (ACE) Female Male	227,322 156,504 70,818	2%	-8.50	2%	-11.60	2%	-25.20%	2%		ACE database
Percentage growth in Enrolment of female Adult and continuing Education (ACE)										ACE database
Percentage growth in Enrolment of male Adult and continuing Education (ACE)										ACE database
Policy Priority 2 Outcome: quality and relevance of ACE programmes improved										
Percentage of learners in ACE who achieve functional literacy	to be established from economic		10%		-16%		-12%	-		ACE database
Percentage of ACE institutions integrating ICT in teaching, learning and assessment	0		4.0%		3%		2%			ACE Database
Policy Priority 3 Outcome: governance and accountability in ACE programmes improved										

Indicator	2017/2018	2018/2019		2019/2020		2020/2021		2021/2022	2022/2023	Source
	Baseline value	Target	Actual value	Target	Actual value	Target	Actual value	Target	Target	
Percentage of ACE institutions that received training in public financial management topics	(3,875)		10%		15%		5%			ACE Database
6.Inclusive Education										
Policy Priority 1 Outcome: provision of inclusive education and training for learners and trainees with disabilities enhanced										
Percentage of learners with special needs in public primary education	1.2 %	1.2 %	1.36%	2.2%	1.6%	3.1%		4.1%	5%	Statistical Booklet 2019 Simulation model
Percentage of learners with special needs in public secondary education	0.16%		0.18%		0.16%					Statistical Booklet 2019
Policy Priority 2 Outcome: learning for children with special needs and disabilities enhanced										
Transition Rate of children with special needs (Primary to Secondary)										NEMIS
Proportion of CBC curriculum materials adapted to special needs and disabilities in pre-primary	50%	60%	60%	70%	70%	80%	80%			KICD
Proportion of curriculum materials adapted to special needs and disabilities in Primary	50%	60%	60%	70%	70%	80%	80%			KICD
Proportion of curriculum materials adapted to special needs and disabilities in Secondary	20%	30%	30%	35%	35%	40%	40%			KICD
Policy Priority 3 Outcome: participation and stakeholder accountability in the management of Inclusive Education enhanced										
7.Teacher Education, Professional Development and Management										
Policy Priority 1 Outcome: teacher training aligned to the requirements of the Competency Based Education										
Percentage of graduating teachers who have been trained in the reformed curriculum	N/A	N/A	xx	N/A	xx			100	100	Teacher Education Reports
Policy Priority 2 Outcome: recruitment and deployment of teachers are improved										

Indicator	2017/2018	2018/2019		2019/2020		2020/2021		2021/2022	2022/2023	Source
	Baseline value	Target	Actual value	Target	Actual value	Target	Actual value	Target	Target	
Pupil-Teacher Ratio in public primary schools	40:1	40:1	41.:1	40:1	39:1	40:1	42:1	40:1	40:1	Statistical booklet 2019
Additional teachers recruited	5000	12700	13700	12700	5000	12700	5000	12700	12700	
Policy Priority 3 Outcome: equity and inclusivity in the utilization of the teacher resource improved										
Percentage of primary schools that present teacher shortage			73		71.5		70			
Percentage of secondary schools that present teacher shortage			88.63		86.63		84			
Policy Priority 4 Outcome: teachers' competencies and professional development improved										
Percentage of teachers trained on Curriculum Based Education (CBE)									100%	
Policy Priority 5 Outcome: coordination, accountability and management of the teaching resource improved										
Percentage of the coordination framework for teacher education and professional development issued									Approved	MOE data
8.Technical vocational education and training										
Policy Priority Outcome 1: Enhance employability of TVET trainees										
Gross enrolment of trainees	267,365(T) 149,496(M) 117,869(F)	249,312(T) 137,820(M) 111,492(F)	359,852 (T) 202,479 (M) 157,373 (F)	274243(T) 151,602 (M) 122641(F)	430,598 (T) 246,486 (M) 184,112 (F)	301,667(T) 166,762(M) 134,905(F)	451,205(T) 258,084(M) 193,121(F)	310,717(T) 171,765(M) 138,952(F)	315,158(T) 166,762(M) 148,395(F)	Economic survey
Policy Priority Outcome 2: Improved gender parities in TVET training										
GPI	0.79	0.79	0.78	1.0	0.75	1.0	0.75	1.0	1.0	Economic survey

Indicator	2017/2018	2018/2019		2019/2020		2020/2021		2021/2022	2022/2023	Source
	Baseline value	Target	Actual value	Target	Actual value	Target	Actual value	Target	Target	
Policy Priority Outcome 3: Improved Quality and Relevance of TVET Training in Kenya										
TVET trainers	3000	4000	4000	5000	5000	6000	6000	7000	8000	Economic survey
TVET centres of excellence	N/A	1	1	2	2	3	3	5	5	TVET MIS
TVCs equipped with ICT equipment	10	20	20	40	40	80	60	130	150	TVET MIS
9.University education sub sector										
Policy Priority 1 Outcome: access and participation in higher education expanded										
No of Student Enrolled (Percentage Growth)	547,316	558262	565,045 (3.2%)	569427	540,876 (-4.2%)	580816	-	592432	604281	CUE Report
University GER	5.3%	5.4%	5.3%	5.5%	4.9%	5.6%	4.9%	5.65%	5.7%	CUE Report
Policy Priority 2 Outcome: eligible students have equal opportunity to university education										
Gender Parity	0.71	0.75	0.75	0.79	0.73	0.82	0.71	0.86	0.9	CUE Report
Policy Priority 3 Outcome: adequate and competent academic staff available in universities										
Gross staff to student ratio in public universities	1:36	1:35	1:30	1:34	1.26	1:32	No data	1:30	1:29	CUE Report
% Teaching staff with PhDs	32%		37%		35%					
Total Academic staff	12662		16572		20489					
Policy Priority 4 Outcome: governance, management and accountability in universities improved										
Performance of university management Performance of University Council	- -	No data No data	-	-	- -	-	-	-	- -	Ministry of Public Service and Gender Reports SCAC
10.Science, technology and innovation sub sector										
Policy Priority 1 Outcome: Human resource capital for science, technology and innovation (ST&I) built and developed										

Indicator	2017/2018	2018/2019		2019/2020		2020/2021		2021/2022	2022/2023	Source
	Baseline value	Target	Actual value	Target	Actual value	Target	Actual value	Target	Target	
Population of researchers per million national population	237.5	-	-	N/A		-	-	-	5% growth in number of research personnel	Kenya National Research and experimental Development (R&D) Indicators Survey Report of June 2019 An online Kenya 2017 population estimate of 45.8 million The UNESCO Institute of Statistics (UIS) method for calculation of researchers per million population
Policy Priority 2 Outcome: Access to science, technology and innovation enhanced										
ST&I infrastructure growth	-	-	N/A	-	N/A	-	N/A	-	-	ST&I Infrastructure Survey Report (to be compiled when ST&I Infrastructure Baseline Survey of 2019/2020 is completed after its interruption by the COVID-19 pandemic onset in Kenya during March 2020)
ST&I priority areas publication	0	1	0	1	1	-	-	-	1	National Research Priorities (2018-2022) booklet
Policy Priority 3 Outcome: Equity and inclusion in science, technology and innovation enhanced										

Indicator	2017/2018	2018/2019		2019/2020		2020/2021		2021/2022	2022/2023	Source
	Baseline value	Target	Actual value	Target	Actual value	Target	Actual value	Target	Target	
List of special interest groups	0	1	-	1	-	1	-	1	1	NESSP (2018-2022), page 75
Population of researchers	10,880	-	-	-	N/A	-	-	-	-	Kenya National R&D Indicators Survey Report of June 2019
Population of special interest group researchers	3,711	-	-		N/A	-	-	-	-	Kenya National R&D Indicators Survey Report of June 2019 (only women researchers' population)
Policy Priority 4 Outcome: A coherent legal, institutional and regulatory framework to support the growth, development, utilization and coordination of ST&I										
Governance and management in ST&I	30%	100%	30%	100%	30%	100%	50%	100%	100%	Draft ST&I Policy (2020 version) submitted for Cabinet Memo in 2020
An Integrated Knowledge Management Information System	0	1	0	1	0	1	0	1	1	Draft ST&I Policy (2020 version)
11. **Post-Training and Skills Development**										
Policy Priority 1 Outcome: formal linkage among Government, Industry and Academia established										
Policy and operational frameworks for work-based learning, labour market placement and other systems linking training to industry, developed	N/A	N/A	N/A	10 County Work-Based Learning Com	4 County Work-Based Learning Committees	20 County Work-Based LCs	0	30 County Work-Based Learning Committees	43 County Work-Based Learning Committees	Analysis of expenditure trends-Recurrent (2017/18-2019/20

Indicator	2017/2018	2018/2019		2019/2020		2020/2021		2021/2022	2022/2023	Source
	Baseline value	Target	Actual value	Target	Actual value	Target	Actual value	Target	Target	
				mittees						
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30% National Volunteers' Programme(G-United) Framework to be developed	80% G-United Framework to be developed	Analysis of expenditure trends-Recurrent (2017/18-2019/20
Intermediate results										
National Skills Development Policy developed	N/A	N/A	N/A	30% NSDP	10% NSDP	90% NSDP	80% NSDP	100% done	N/A	Performance Review (PPR)2017/18-2019/2020
Development of Industry- Academia linkage and Policy	N/A	N/A	N/A	5 National Conferences	2 National Conferences	3 Conferences	0	1 National Conference 50% Industry-Academia	2 National Conferences	PTSD Strategic Plan (2019/2020-2024)
Establishment of Office of Career Services (OCS) Regulatory Framework	N/A	N/A	N/A	54 OCS	17 OCS	23 OCS	50 OCS	227 OCS	211OCS	Executive Order No. 1 2020 (revised)

Indicator	2017/2018	2018/2019		2019/2020		2020/2021		2021/2022	2022/2023	Source
	Baseline value	Target	Actual value	Target	Actual value	Target	Actual value	Target	Target	
Youth trained under the National Apprenticeship and National Young Innovators Entrepreneurship Programmes	N/A	N/A	N/A	N/A	N/A	100 % Guidelines developed	100% Guidelines developed	180 youth to be trained (100 in apprenticeship and 80 in entrepreneurship)	1350 youth to be trained (450 in apprenticeship and 900 in entrepreneurship)	PTSD Strategic Plan 2019-2024 and Executive Order No. 1 2020 (revised)
Policy Priority 2 Outcome: governance in the Post-Training and skills development function enhanced										
Governance structure for the State Department for Post-Training and Skills Development	N/A	N/A	N/A	50% of PTSD structure done	30% done	90% to be done	90% done	100% done	Approved Organizational Structure for Post-Training by PSC	Governance structure for the State Department for Post-Training and Skills Development
Intermediate										
National Skills Management Information System	N/A	N/A	N/A	N/A	N/A	30 % of the Database	30% of the Database	50% of the Database	100% National Skills and Employment Database	MoE CS Performance Contract 2020/21
Procurement plan for offices and equipment	N/A	N/A	N/A	30%	20% procured	50% to be procured	40% procured	40% to be procured	100%Operationalized offices	PTSD SP (2019-2024)

Indicator	2017/2018	2018/2019		2019/2020		2020/2021		2021/2022	2022/2023	Source
	Baseline value	Target	Actual value	Target	Actual value	Target	Actual value	Target	Target	
12. Quality Assurance and Standards										
Policy Priority 1 Outcome: education quality assurance and standards aligned to CBC and CBA										
Percentage of school inspection reports that include elements of CBC/CBA explicitly	20	30	25	40	31	50	40	70	100	School assessment reports
Policy Priority 2 Outcome: quality and maintenance of standards in institutions of basic education enhanced										
Percentage of mainstreaming Quality Assurance in institutions	N/A	25	10	50	30	70	40	85	100	DQAS reports
13. Kenya national qualification framework										
Policy priority outcome 1: Access to education and training qualifications										
National Policies for Qualifications	N/A	N/A	N/A	N/A	N/A	5	2	5	5	KNQA
Development of KNQF Regulations Percentages	N/A	100	100	-	-	-	-	-	-	KNQA
Policy priority outcome 2: National regulatory assurance system for national qualifications										
Registration of Qualifications in KNQF, Number	N/A	N/A				1000	1318	1000	1000	KNQA
Qualifications Database, Number	N/A	N/A	N/A	N/A	N/A	1	1		-	KNQA
Implementation of KNLRD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60%	100%	KNQA
Number of Qualifications Awarding Institutions, Professional bodies, Education and Training Providers capacity built	N/A	N/A	N/A	N/A	N/A	80	46	30	30	KNQA
14.Cross Cutting and Contemporary Issues										
Policy Priority 1 Cross Cutting and Contemporary Issues and value systems mainstreamed in education and training										

Indicator	2017/2018	2018/2019		2019/2020		2020/2021		2021/2022	2022/2023	Source
	Baseline value	Target	Actual value	Target	Actual value	Target	Actual value	Target	Target	
Percentage of policy operational frameworks issued to guide integration of cross-cutting and contemporary issues and value systems in education and training	N/A	-	20	-	30	20	20	20	10	Cross-cutting Issues Reports

N/A means that the information is not available thus data collection is necessary.

ANNEX IV: LIST OF NESSP 2018-2022 MID -TERM REVIEW TECHNICAL WORKING GROUP MEMBERS

1.	Dr. Elyas Abdi, OGW	Director General
2.	Dr. Silvester Mulambe	Director Policy, Partnerships and EACA
3.	Hezron Momanyi	Director Planning, Early Learning and Basic Education
4.	Samuel Nthenge	Director Planning, University Education and Research
5.	Evelyn Anupi	Director Planning, Vocational and Technical Training
6.	Evelyn Bengal	Head of Planning, Post-Training and Skills Development
7.	Dickson Murira	Director Planning, Implementation of Curriculum Reforms
8.	Anne Gachoya	Directorate of Policy, Partnerships and EACA
9.	Truphena Kirongo	Director General's Office
10.	Sebastian Owanga	Directorate of Project Coordination and Delivery
11.	Nicholas Ambundo	Planning, Early Learning and Basic Education
12.	Samwel Akal	Planning, Vocational and Technical Training
13.	Dr. John Nyangena	Planning, University Education and Research
14.	Emis Njeru	National Council for Nomadic Education in Kenya
15.	Selestine Mirumbe	Directorate of Early Childhood Development and Education
16.	Chris Okoth	Directorate of Primary Education
17.	Mujumba Obwoyere	Directorate of Secondary Education
18.	Tom Onchari	Directorate of Adult and Continuing Education
19.	Nyamai Mulatya	Directorate of Special Needs Education
20.	Gilbert Kyatha	Teachers Service Commission
21.	David Kungu	Kenya Institute of Curriculum Development
22.	Paul Njuguna	Kenya National Examinations Council
23.	Dr. Assumpta Matei	Kenya National Examinations Council
24.	Agnes Njoroge	Directorate of Quality Assurance and Standards
25.	Alfrick Biegon	Kenya National Qualifications Authority
26.	Christine Kariuki	Directorate of Research, Science and Technology
27.	Charity Muchoki	National Council for Science, Technology and Innovation
28.	Stephen Mogoba	Implementation of Curriculum Reforms
29.	Irene W. Kamau	Directorate of Vocational Education and Training
30.	Hyrine Matheka	Commission for University Education
31.	Richard Mukiri	Planning, University Education and Research
32.	Ateng Ogwel	Planning, Early Learning and Basic Education
33.	Samuel Muraya	Council of Governors
34.	Justus Maende	Jomo Kenyatta Foundation
35.	Andrew Nyamosi	Jomo Kenyatta Foundation
36.	Virginia Mumo	UNESCO
37.	Philip Kinara	UNHCR
38.	Janeann Kiviu	UNICEF
39.	Rommanah Somba	UNICEF

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