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DEVELOPMENT**

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Towards Realizing Quality, Relevant and Inclusive Education and Training

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LIST OF ABBREVIATIONS AND ACRONYMS

APBET	Alternative Provision of Basic Education and training
ASAL	Arid and Semi-Arid Lands
BALP	Basic Adult Literacy Programme
BOG	Board of Governors
BOM	Board of Management
CAT	Competence Assessment Test
CBC	Competence Based Curriculum
CBET	Competence Based Education and Training
CBO	Community Based Organization
CDACC	Curriculum Development Assessment and Certification Council
CDE	County Director of Education
CDF	Constituency Development Fund
CEB	County Education Board
CEC	County Education Committee
CEMASTEА	Centre for Mathematics., Science and Technology Education in Africa
CPD	Continuous Professional Development
CPE	Continuous Professional Education
CPPMU	Central Planning and Project Monitoring Unit
CRC	Convention on the Rights of the Child
CS	Cabinet Secretary
CUE	Commission for University Education
DDR	Discipline Differentiated Remuneration
DGE	Director General of Education
DUC	Differentiated Unit Cost
EAC	East African Community
EARCs	Education Assessment Resource Centres
ECDE	Early Childhood Development and Education
ECTS	Exemptions and Credits Transfer System
EFA	Education For All
ESQAC	Education Standards and Quality Assurance Council
ESSP	Education Sector Strategic Plan
FBO	Faith Based Organization
FDSE	Free Day Secondary Education
FPE	Free Primary Education
FGM	Female Genital Mutilation

FTSE	Full-Time Student Equivalent
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
GoK	Government of Kenya
GPI	Gender Parity Index
GTT	Government Trade Test
HELB	Higher Education Loans Board
HDI	Human Development Index
HIV	Human Immuno-Deficiency Virus
HRD	Human Resource Development
HRM	Human Resource Management
HTELB	Higher and Tertiary Education Loans Board
IAG	Industry Advisory Group
IB	International Baccalaureate
IBQA	Internal Based Quality Assurance
ICT	Information , Communication and Technology
IGA	Income Generating Activity
IGCSE	International General Certificate of Secondary Education
ILO	International Labour Organization
INSET	In-Service Education and Training
ISCED	International Standard Classification of Education
ISO	International Organization for Standardization
IT	Information Technology
JKF	Jomo Kenyatta Foundation
KEMI	Kenya Education Management Institute
KICD	Kenya Institute of Curriculum Development
KESI	Kenya Education Staff Institute
KLB	Kenya Literature Bureau
KNALS	Kenya National Adult Literacy Survey
KNATCOM	Kenya National Commission for UNESCO
KNEC	Kenya National Examinations Council
KNOCS	Kenya National Occupational Classification Standard
KNQF	Kenya National Qualifications Framework
KUCCPS	Kenya Universities and Colleges Central Placement Service
LATF	Local Authority Transfer Fund
LIWA	Linking Industry With Academia
MCDAs	Ministries, Counties, Departments and Agencies
MDGs	Millennium Development Goals
MDTI	Multi-Purpose Development Training Institute

M&E	Monitoring and Evaluation
MoE	Ministry of Education
MTEF	Medium Term Expenditure Framework
MVC	Most Vulnerable Children
NACONEK	National Council for Nomadic Education in Kenya
NAS	National Assessment System
NEMIS	National Education Management Information System
NER	Net Enrolment Rates
NFE	Non-Formal Education
NFS	Non-Formal Schools
NGOs	Non-Governmental Organizations
NPs	National Polytechnics
NQF	National Qualification Framework
NSA	Non-State Actor
ODE	Open and Distance Education
ODL	Open and Distance Learning
ODeL	Open and Distance e Learning
PAs	Parent Associations
PLP	Post Literacy Programme
PCR	Primary Completion Rate
PPPs	Public Private Partnerships
PS	Principal Secretary
PTR	Pupil Teacher Ratio
QAS	Quality Assurance and Standards
R&D	Research and Development
SAGAs	Semi-Autonomous Government Agencies
SCs	Student Councils
SCDE	Sub County Director of Education
SDGs	Sustainable Development Goals
SEBF	Secondary Education Bursary Fund
SEPU	School Equipment Production Unit
SNE	Special Needs Education
STEM	Science Technology Engineering and Mathematics
ST&I	Science Technology and Innovation
TIVET	Technical, Industrial, Vocational and Entrepreneurship Training
TPR	Teacher Pupil Ratio/Textbook Pupil Ratio
TSC	Teachers Service Commission
TTC	Teacher Training College
TU	Technical University

TTI	Technical Training Institute
TVCs	Technical and Vocational Colleges
TVET	Technical and Vocational Education and Training
TVETA	Technical and Vocational Education and Training Authority
UASU	Universities Academic Staff Union
UE	University Education
UFB	University Funding Board
UN	United Nations
UNESCO	United Nations Education Scientific and Cultural Organization
UPE	Universal Primary Education
UT	University of Technology
VTC	Vocational Training Centres
YP	Youth Polytechnics

DEFINITION OF TERMS

Access:	The opportunity availed for one to enter education and training.
Accreditation:	A process of assessment and review that enables an education and training program or institution to be recognized or certified by the appointed body as meeting appropriate standards.
Admission:	The granting of opportunity for a qualified applicant to pursue education and training at a given institution and/or in a given programme.
Bachelor's Degree:	The first degree offered by a university or equivalent institution.
Differentiated Unit Cost:	The annual cost of providing a particular degree program per student. It takes into account all operational and maintenance costs, for example the staff costs, facility costs and other institutional overhead costs, but excludes capital development costs.
Discipline	Academic staff remuneration that takes into account professional, labour market, and strategic focus factors for different disciplines and institutions.
Differentiated Remuneration:	
Distance learning;	Mode of delivering interactive education to students who are not physically present in a traditional educational setting such as a classroom
Electronic Learning:	Also referred to as e-learning, comprises all forms of electronically supported interactive learning and teaching.
Equity:	Being fair and impartial in providing equal opportunities for access to education and training to all.
Head teacher:	The lead administrator in an educational institution charged with the responsibility of curriculum and policy implementation, ensuring optimal utilization of educational resources, maintaining quality and standards and promoting professional practices and synergy in the institution and the community, while executing the teaching function.
ISCO" 88 Standard;	International Standard Classification of Occupations (ISCO) is a tool for organizing jobs into a clearly defined set of groups according to the tasks and duties undertaken in the jobs.
Knowledge value chain:	A sequence of intellectual tasks by which knowledge workers build unique competitive advantage and/or social and environmental benefit.
Learner:	A person who is willing to gain knowledge, information, comprehension and skill by studying, practicing or being taught

Non-Formal Education	Any organized educational activity taking outside the framework of the formal school education system and targets specific groups/categories of persons with life skills, values and attitudes for personal and community development
Open Learning:	The teaching method that allows interest-guided, interactive and, independent learning.
Private Institution:	An institution established as either for-profit or not -for-profit for education and training purposes.
Public Institution:	An institution wholly owned by the Government or funded out of public funds for education and training purposes.
Pupil:	A person who is a child or young person in school or in the charge of a teacher or instructor for learning purposes. The usage of the term is reserved for those who attend pre-primary and primary education.
Quality:	Degree of excellence as measured against agreed upon standards.
School	An educational institution where learners receive instruction and meets the basic standards stipulated in the regulations and include those offering alternative approaches of multi-grade, double-shift, mobile schooling, out of school programmes, adult and continuing education, non-formal education, distance or correspondence instruction, or accelerated learning and talent based institutions
Student:	Someone who attends an educational institution for learning purposes. The usage of the term is reserved for those who attend secondary, tertiary or university education.
Teacher	A teacher means a person who imparts knowledge, competencies, skills and attitudes to learners and has undertaken a recognized pedagogical training programme and attained accredited certification under the Teachers Service Commission Act.
Training:	The process of acquisition of knowledge, skills, and attitudes of vocational or practical skills and know-how that relate to specific useful competencies, with a goal of improving one's capability, capacity, and performance.

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CHAPTER 1: INTRODUCTION

1.0 Background to the Education and Training Sector in Kenya

Education and training is the primary means of social mobility, national cohesion and socio-economic development. Since independence, the Government of Kenya has been committed to the provision of education and training to her citizens. Kenya, like other parts of the world, has experienced the impact of globalization thus increasing inter-dependence between and within states and the need for people to become responsible citizens both nationally and internationally. Similarly, trade and communications have been revolutionized, while human capital requirements, especially because of the Information, Communication and Technology (ICT) revolution, and has experienced rapid growth. The government continues to reform the education and training sector to respond to the emerging issues thus ensuring that the country's goals and aspirations are realized.

The Constitution of Kenya, 2010 has the Bill of Rights at its core while the Kenya Vision 2030, acknowledges the need to reform education and training to create a sector fit for purpose. This has led to the policy provisions embodied in this document which address the constitutional requirements and national aspirations as well as offer direction in modernizing and re-branding the country's education and training sector.

Kenya Vision 2030 places great emphasis on the link between education and the labour market, the need to create entrepreneurial skills and competences, and strong public and private sector partnerships. It articulates the development of a middle-income country in which all citizens will: embrace entrepreneurship, engage in lifelong learning, and perform non-routine tasks, among others. This has considerable importance for the kind of education and training system required to deliver the requisite skills, competencies and attitudes. As such there will be need to address issues related to quality, service delivery, curriculum, relevance, teacher development and management at all levels as well as trainers in the areas of technology and entrepreneurial skills development.

To address these issues, the government provides policy direction for reforms in education service delivery through introduction of vocational, technical, talent and academic curriculum pathways. Information, Communication and Technologies (ICTs) will be used as a teaching-learning tool. Kenya Vision 2030 also recognizes the need for a literate citizenry and sets goals for eliminating adult illiteracy while increasing learning achievements.

Under the Constitution, education and training in Kenya is governed and managed under a two-tier government, the National Government and the County Governments. Education and training is offered at four main levels as follows; pre-primary, basic education, Technical and Vocational Education and Training (TVET) and University. The County Governments are responsible for management of pre-primary and Vocational Training Colleges, while the National Government is responsible for the management of other levels.

The Constitution of Kenya (2010) articles 43(1)(f), 53(1)(b) 54 and 55(a) makes education a right of every Kenyan while the Kenya Vision 2030 underscores the importance of education in ensuring relevant human and social capital for sustainable development. The Constitution guarantees every child the right to free and compulsory basic education. Further, it provides for access to affordable tertiary education, training and skills development. The reform in education and training seeks to shift to a competence-based curriculum at all levels.

1.1 Basic Education

According to the Bill of Rights, education is a fundamental human right. This is consistent with the international education commitments and other international conventions to which Kenya is a signatory. For example, the African Charter on the Human and People's Rights, Article 17, provides that every individual shall have a right to education; the African Charter on the Rights and Welfare of the Child, Article 11, articulates detailed provisions on the right to free and compulsory basic education for the child and, states' obligation towards that right. The United Nations International Convention on Social and Economic Rights, Article 13, declares the recognition of the right of all to education and the objectives thereof. The Convention on the Rights of the Child, Articles 28, 29 and 30, secure the rights of a child to free and compulsory basic education.

Kenya has also ratified the Incheon Declaration which was adopted at the World Education Forum (WEF 2015) held in Incheon, Republic of Korea. The Incheon Declaration constitutes the commitment of the education community to Education 2030 and the 2030 Agenda for Sustainable Development, recognizing the important role of education as a main driver of sustainable development. Additionally, education is enabler to achievement of national priorities including the 'Big Four Agenda'.

1.2 Tertiary Education and Training

The Vision 2030 has placed special demands on the tertiary sector as the leading engine that the economy must essentially rely upon to produce adequate numbers of middle level professionals needed to drive the economy towards the attainment of the Vision. Kenya has experienced moderate growth over the last 50 years in Tertiary Education and Training. However, the country is yet to produce adequate and skilled middle level human resource required to meet the demands for national development.

1.3 Technical Vocational Education and Training

The objective of Kenya's Vision 2030 is to make Kenya "a newly industrializing, middle income country, providing high quality life for all its citizens, by the year 2030". In order to achieve this, Kenya aims to produce goods and services of industrial nature that can be sold beyond her borders to generate real income for the country. It has however long been recognized by development economists that a country is only able to realize such progress if its economy is innovative. An innovative economy on the other hand is to be realized through technological innovation. Any country that intends to make a breakthrough in industrialization and technological development must begin by ensuring that it has a critical mass of well qualified technologists and engineers to spur the development.

The broad engineering profession is typically considered to be comprised of five cadres of staff, namely; engineer, technologist, technician, crafts-person and artisan. The current trend is having low management structures in the work place with the roles of artisans and crafts-people merging into one common cadre of operators. Therefore, a four cadre engineering workforce has become popular within formal enterprises. For the effective execution of the engineering function within an economy, it is important that these cadres are represented in appropriate proportions. For most developed countries the ideal ratio for the four categories of professional engineer to technologist to technician to operator is 1:2:4:16. However, for a typical developing country it is considered that the more realistic ratios would be more or less 1:3:12:60, which Kenya strives to achieve in the long run.

1.4 Teacher and Trainer Education and Development

Teacher and trainer education in Kenya is provided to meet the demands of the following levels: pre-primary, primary, secondary and tertiary. The institutes offering training include: ECDE centres, primary teacher training colleges, diploma teacher training colleges, technical training colleges and the universities. Pre-primary and primary teacher training courses focus on pedagogy and subject knowledge content. Secondary teacher training courses are provided in two models i.e. consecutive and concurrent models. In the consecutive model, the trainees undertake the subject area first and graduate with either Bachelor of Arts or Bachelor of Science degree and later undertake a nine-month postgraduate diploma to qualify as trained teachers.

In the concurrent model, the trainees study both the subject area and pedagogy at the same time and graduate with a Bachelor of Education Degree. Both pre-primary and primary certificate and the diploma awards are examined by the Kenya National Examinations Council, while the degrees are awarded by the respective universities. The training of Technical and Vocational Education and Training (TVET) teachers and trainers is spread out in different institutions depending on level of training. Continuous Professional development of teachers is conducted by several players including Kenya Education Management Institute (KEM), Kenya Institute of Special Education (KISE), Kenya Institute

of Curriculum Development (KICD) and Centre for Mathematics, Science and Technology Education in Africa (CEMASTEIA).

Teacher management is classified into three main categories: entry, maintenance and exit. The entry component includes assurance of the right persons entering the teaching service; registration and recruitment of teachers while maintenance entails deployment, remuneration, promotion, discipline and maintenance of teaching standards. On the other hand, teacher exit entails management of teachers who leave the Commission through natural attrition. The Constitution of Kenya (2010) Chapter fifteen Article 248 established the Teachers' Service Commission (TSC) as a constitutional commission to undertake Teacher Management. Under its Mandate, the Commission ensures the establishment and maintenance of a sufficient professional teaching force that is equitably distributed and optimally utilized in public educational institutions.

The TVET curriculum has been reformed to be industry driven hence requires trainers with industry experience and competences. The TVET trainer will be developed to be responsive to the labour market demands. To achieve this, the training will be undertaken in a joint partnership with the Government, industry and the academia. The government will therefore, reform the current recruitment and employment of trainers in TVET institutions.

1.5 University Education

Kenya's future as a prosperous and internationally competitive nation will depend on both the university system and the Science, Technology and Innovation sector to create a sustainable pool of highly skilled human resource base that will sustainably support and trigger innovation in priority areas. The sector still experiences issues of inadequate access and equity, low quality and relevance of skills, weak governance and accountability among others. To address quality and relevance in education and training, strategies for supplying modern teaching and research equipment in engineering and applied sciences and training of the university teaching staff in the same areas at masters and doctorate levels are in place.

1.6 Evolution of Policy on Education and Training

The sector has undertaken reforms in the last 10 years guided by the following; The Sessional Paper No. 1 of 2005 on Education, Training and Research led to reforms through a Sector Wide Approach to Planning (SWAP). Though the emphasis was on access, equity, quality, relevance and the strengthening of governance and management, the expected returns on investment in education in terms of productive and skilled manpower has not been realized to the full. In addition, the Constitution of Kenya (2010) has placed demands that have implications on education and training. This has necessitated the development of this policy through an elaborate consultative stakeholder process.

The Task Force on the Re-Alignment of the Education and Training Sector to the Constitution of Kenya 2010 recommended the following;

- i. A more flexible and comprehensive structure for Kenya Education System and Curriculum Reform to specify the expected competences at every level of learning. The recommended structure was 2 years of Pre-primary, 6 years of Primary (3 years lower and 3 years upper), 6 years Secondary (3 years junior and 3 years senior), 2 years minimum of Middle Level Colleges and 3 years minimum University education.
- ii. Expand access to education at all levels.
- iii. (a) Undertake major curriculum reviews. (b) Abolish all school levies which discriminate against poor households. (c) Review capitation grants to be in line with inflationary trends. (d) Establish a National Council for Nomadic Education in Kenya (NACONEK).
- iv. Revamp Accreditation and Assessment System at all levels
- v. Set up a National Qualification Framework for determining and assessing the level of achievement and competences of learners who have gone through different learning systems or different education structures. In order to achieve this, a National Qualification Authority (NQA) be established by law.
- vi. Reduce the cost of education to households through the provision of teachers, teaching and learning materials and grants to cover operational and maintenance expenses.
- vii. Fast track the realization of the national skills and competences training programmes at the TVET level.
- viii. Universities to develop their curricula and programmes based on the curricula offered at the Basic Education cycle.
- ix. Commission for University Education (CUE) to quality assure the programmes offered at all Universities in the country

1.7. Articles in the Constitution of Kenya, 2010 Relevant to Education and Training

The functions of education and training are shared between the national and county governments as contained in Article 189 and Schedule 4 of the Constitution. The functions of the National Government are: education policy, standards, curriculum, examinations, granting of university charters, universities, tertiary educational institutions, institutions of research, higher learning, primary schools, special education, secondary schools, special education institutions and promotion of sports and sports education. The functions of the County Government in relation to education are: pre-primary education, village polytechnics, home craft centres, and childcare facilities.

All the reforms contained in this policy framework are anchored in the Constitution of Kenya (2010). The Constitution makes provision for the rights of Kenyan citizens to education. In particular:

- I. Article 10(1) of the Constitution states that the national values and principles of governance are binding on all State organs, State officers, public officers and all

- persons whenever any of them (a) applies or interprets the Constitution; (b) enacts, applies or interprets any law; or (c) makes or implements public policy decisions.
- II. Article 10(2) of the Constitution sets out the national values and principles of governance. These include inter alia, the sharing and devolution of power, the rule of law and the participation of the people; equity, inclusiveness, equality, human rights, nondiscrimination and the protection of marginalized groups, good governance, integrity, transparency and accountability, and sustainable development.
 - III. Article 11(2) (b) and (c) of the Constitution recognizes the role of science and indigenous technologies in the development of the nation, and the promotion of intellectual property rights of the people of Kenya.
 - IV. Articles 62, 63, 66 refer to public land, which will be vested in and held by a county government in trust for the people resident in the county, and shall be administered on their behalf by the National Land Commission; unregistered community land to be held in trust by county governments on behalf of the communities for which it is held; enactment by Parliament of appropriate legislation ensuring that investments in property benefit local communities and their economies. The articles are relevant since educational infrastructure is constructed on public, and or community land and some institutions especially at tertiary level will need to hold title to the land on which they are established.
 - V. Articles 174, 175, 176, 189 and Schedule 4 of the Constitution have provisions on the devolution of services to county governments, ensuring equity, access, quality and special attention to the minorities and marginalized groups. The national government will determine efficient and effective mechanisms for devolving education and training services to the county level as and where necessary.
 - VI. Articles 201(a), (d), and (e), 226, and 227 have provisions on Public Finance relating to transparency, accountability, and appropriate governance of public monies. Governance structures in education and training will to a large extent be guided by the same.
 - VII. Chapter 13 and its articles on the Public Service provides for the values and principles of public service. Boards of governors and the managements of educational and training institutions will abide by these principles.
 - VIII. Article 237 establishes the Teachers' Service Commission (TSC) mandated with teacher management.

1.8.Devolution and Decentralization of Education and Training

The Constitution of Kenya (2010) provides for devolution of services to the county governments. The Constitution provides that education will continue to be primarily a national government responsibility. This has important implications for National level resource distribution and the devolved decision-making.

Decentralization of the education and training services to the institutional level is relatively well established. The role of the Counties, Sub-counties including Boards of Management

(BOMs), and Parents Association have been integrated into county education service delivery systems.

There is need to continuously rationalize additional education and training functions to be decentralized, transferred and delegated from the National to the County governments and areas of possible collaboration. This affords an opportunity to strengthen the education and training departments at the county level to assist the national line departments to better supervise, regulate, monitor, evaluate and legislate as appropriate in the education and training sector. The decentralized functions would require appropriate accountability measures.

1.9. Resource Allocation

Resource allocation will depend on human resource issues, which include recruitment procedures by counties, staff salaries and allowances, and the qualification framework. It is envisaged that the counties will receive funding equivalent to 15Percent of total revenue and access to an “Equalization Fund” (Constitution, clause 204) to provide basic services. The following are key issues for consideration:

- i. Assigning a given proportion of the Equalization Fund to education and training service delivery at county level;
- ii. The criteria for allocating the National Constituency Development Fund (CDF)
- iii. Policies towards user fees and levies;
- iv. The cost of transferred, new and proposed, functions and services.

1.10. Management of Education and Training

The Ministry of Education (MOE) is committed to the provision of quality and relevant inclusive education, training and research to all Kenyans. At present, MOE is headed by the Cabinet Secretary (CS). The Education Sector comprises four State Departments, each headed by a Principal Secretary (PS); and the Teachers Service Commission.

Departments and their Mandates

Early Learning and Basic Education

The department facilitates provision of basic education to all deserving citizens while addressing the demands of the Kenya Vision 2030. In so doing, the sub sector is mandated to: develop strategies to address internal efficiencies in the education system; improve financial management and accountability; and to make basic education in the country more inclusive, relevant and competitive regionally and internationally.

Vocational and Technical Training

The department is responsible for promoting access, equity, relevance and quality technical and vocational education and training in the country. The department does this through: registration of TVET institutions; formulation, coordination, and review of policies and strategies in curriculum design, development, implementation, assessment and certification in TVET; provision of quality assurance services to TVET Institutions; setting of trainees’ admission criteria to TVET institutions; promoting research, science, technology and

innovation in TVET; and oversee the management of National Polytechnics, Technical and Vocational Colleges, Vocational Training Centers and Technical Trainer Colleges. The Vocational and Technical Training department has a major responsibility of ensuring availability of middle level manpower needed to drive the economy towards the attainment of the Vision 2030. The success of the Vision and the achievement of 'Big Four agenda' is hinged in the quality of the skilled manpower.

University Education

The department's responsibilities include; University education policy, University education management, Management of continuing education (excluding TVETs), Public Universities management and Education research and policy. The investment climate is crucial, as are the right incentive structures, to guide the allocation of resources, and to encourage research and development. The institutional, legal and policy reforms and funding in the university sub-sector reaffirms the realization of this crucial role that university education and ST&I play towards making Kenya a knowledge-based economy.

Post Training and Skills Development

The department is responsible for addressing the disconnect between demand and supply of skilled manpower. The department's mandate 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.

Teachers' Service Commission

The Teachers' Service Commission is responsible for Teacher Management. This mandate is spelt out under Article 237 sub-section 1-3 of the Constitution of Kenya (2010). It includes; registration of trained teachers, recruitment and employment of registered teachers, assignment of teachers employed by the Commission for service in any public school or institution, promotion and transfer of teachers, exercising disciplinary control over teachers and termination of employment of teachers. Further, the Commission is mandated to: review the standards of education and the training of persons entering the teaching service; review the demand and supply of teachers and advise the National Government on matters relating to the teaching profession.

The Ministry has SAGAs with specific mandates including :the Kenya Institute of Curriculum Development (KICD), the Kenya Education Management Institute (KEMI) - Sector capacity building and development, the Kenya National Examination Council (KNEC) - Examinations and Certification, the Jomo Kenyatta Foundation (JKF), the Kenya Literature Bureau (KLB), the Kenya Institute of Special Education (KISE) and the Centre for Mathematics, Science and Technology in Africa (CEMASTEIA), School Equipment Production Unit (SEPU), Technical Vocational and Education and Training Authority (TVETA) Kenya National Qualifications Authority(KNQA), TVET - Curriculum Development Assessment and Certification Council (CDACC), National Commission for Science Technology and Innovation (NACOSTI), Commission for University Education

(CUE), Higher Education Loans Board (HELB), University Funding Board (UFB), Kenya Universities and Colleges Central Placement Service (KUCCPS), National Research Fund (NRF), Kenya National Innovation Agency (KENIA), among others. There is need to strengthen these institutions and ensure accountability mechanisms are in place.

The Kenya National Commission (KNATCOM) for UNESCO has a mandate of implementing and coordinating Information and Communication across twelve (12) key Government Ministries and departments. The Commission derives its mandate from the UNESCO Constitution and Charter of the National Commissions for UNESCO. KNATCOM is a liaison agency between UNESCO, and State Agencies or organizations dealing with the five areas of competence. KNATCOM shall therefore be strengthened by promoting partnerships with relevant organizations

1.11. Growth of the Education and Training Sector

Infrastructure

Expansion of education in Kenya over the years and ongoing education reforms has created increased demand for infrastructure and introduced new categories of need such as workshops. There are many issues relating to infrastructure across the sector. These include availability, appropriateness, quantity and quality. The Ministry of Education provides guidelines to ensure these parameters are adhered to. With the new constitution, the county governments have been charged with responsibility of developing the infrastructure capacity of pre-primary and youth polytechnics. However, many of them are hosted in primary schools which are under the national government. This calls for collaboration between the two levels of governments.

Population growth and increased enrolment coupled by the drive to ensure 100Percent transition has placed a strain on educational infrastructure as the demand is not in tandem with its growth. This demands for new models for development of infrastructure such Public Private Partnerships. The mainstreaming of early childhood care and education, pre-primary as part of basic education makes the need for innovative ways to address this deficit paramount. With the creation of different development funds such as the National Government Constituency Development Fund (NGCDF) development of education infrastructure is largely uncoordinated and in many cases has led to duplication of efforts and wastage. While devolution brings new opportunities for service delivery improvements, there are potentially considerable resource implications on devolved functions, which will need to be considered carefully.

All of these issues need to be seen within the context of major reforms within the education and training sector. Mainly, these relate to embracing shared responsibility for education and training, introducing credible governance and anti-corruption measures, as well as sector policies at all education and training levels.

Basic Education Sector

The education sector in Kenya has experienced massive expansion in enrolment and number of institutions over time. According to the Ministry's National Education Management Information System (NEMIS), the number of public and private primary schools increased from 6,058 in 1963 to 35,442 in 2017, while the number of secondary schools has increased from 151 to 10,665 over the same period. Enrolment in primary education has grown from 891,103 pupils in 1963 to about 10.4 million pupils in 2017, while enrolment in secondary education has grown from approximately 30,000 students in 1963 to approximately 2.8 million in 2017. The increase has been accelerated by the introduction of Free Primary Education (FPE) and Free Day Secondary Education (FDSE) programmes in 2003 and 2008 respectively.

Technical and Vocational Education and Training Sector

The technical education subsector has ten (10) national polytechnics, one (1) Technical trainers' college, sixty-five (65) technical and vocational colleges (TVCs) currently under the Ministry of Education. Under the government's effort to expand TVET, an additional 140 TVCs are being established. There are 697 Vocational Training Centres under county governments. There are over 90 other training institutions spread in 15 other Ministries and about 1,000 vocational training colleges under private, commercial, civil society and faith based organizations including some company-based training schools. Expansion of public TVET institutions has resulted in significant increase in enrolment from 60,000 in 2013 to 275,139 in 2017.

University Education Sector

The number of public universities in Kenya increased from 8 in 2012 to 32 in 2017. This increase was part of expansionary strategy to increase access to University education. The number of chartered private universities increased from 15 in 2012 to 18 in 2017. The award of full charters to Public university constituent colleges led to the decrease in the number of constituent colleges from 23 in 2012 to 3 in 2017. In addition, Public universities operate university campuses across the different regions in the country and this stood at 31 in 2017. The Government has expanded access to university education through establishment of new universities and expansion of the existing ones. This is observed through increased enrolment in universities from 324,560 students in 2013/2014 financial year to 564,507 in 2016/17.

Kenya National Qualifications Framework

There are various qualifications in the labour market, by type and level, having been obtained at different times from different education systems in Kenya. There have been various curriculum and instruction designs including among others standard curriculum, broad-based curriculum and competency-based curriculum designs that have been pursued in education and training to yield the variety of qualifications in the labour market today. Guided by the principle of inclusivity, the KNQF targets all academic and TVET qualifications obtained through completion of any curriculum design without discrimination on the basis of the route followed to achieve the awards.

Programmes and entry grades are varied and include training of those even without academic achievement being set as an entry requirement. Qualifications obtained by candidates, mainly through the structured government trade test schemes also form a vital part of the KNQF. For the purpose of the KNQF, English is the language of assessment and certification of national qualifications at all levels and as such certificates issued locally or from foreign systems in a language other than English shall be accompanied by a competent translation in English.

The scope of KNQF encompasses qualifications for all core educational and training programmes at all levels and covers recognized certificates, diplomas, degrees and any award obtained under formal or alternative settings for the provision of basic education, training and higher education as the broad cycles of the national education and training system. It is understood that the Government will progressively work towards diversifying and formalizing education and training provision across non-formal and informal teaching and learning settings.

1.12. Rationale for this Sessional Paper

The overall policy goal for the Government is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all in order to give every Kenyan the right to education and training as provided in the Constitution of Kenya, 2010. This will be achieved through the provision of all-inclusive quality education and training that is accessible and relevant to all Kenyans. This is in tandem with Kenya Vision 2030 and will contribute to the achievement of the “Big Four Agenda” by providing the requisite skilled human resource and promoting research and development. The Education and Training Policy framework therefore provides the rationale for continued reforms in the current education system in order to enable all Kenyans to have access to quality lifelong education and training. It is envisioned that the development of a competence based curricula will provide learners with the opportunity to acquire the pre-requisite knowledge, skills, values and attitudes to drive the country into a knowledge –based and middle income industrialized nation.

The Government has, over the years, demonstrated its commitment to the development of education and training through sustained allocation of resources to the sector. However, despite the substantial allocation of resources and notable achievements attained, the sector still faces major challenges. Some of these challenges relate to completion, transition, equity, quality, relevance, efficiency in the management of educational resources, cost and financing of education, gender and regional disparities, and teacher quality and teacher utilization. In addition, children with special needs and disabilities issues have not adequately been addressed. The purpose of this Sessional Paper is to address these challenges and consequently provide a policy framework for the education and training sector in order to meet the challenges of the 21st Century. As a sequel to this Sessional Paper, the ministry will develop an Education Sector Strategic Plan that will provide a comprehensive framework for programme implementation. In addition, the ESSP will provide a framework within which all providers of education and training services will participate as partners. The ESSP will also be linked to the

Medium Term Expenditure Framework (MTEF). In addition to the above, the development of this Sessional Paper is aimed at harmonizing various policies, Acts, guidelines and legislations as well as addressing emerging priorities and issues since the last Sessional Paper, in 2005.

CHAPTER 2: MACROECONOMIC AND DEMOGRAPHIC CONTEXT

2.1. Demographic, Macroeconomic and Public Finance Context

Kenya is bordered by Tanzania to the South and Southwest, Uganda to the West, South Sudan to the North-west, Ethiopia to the North, and Somalia to the North-east. It covers 581,309 km². Swahili is the national language of Kenya and the first official language, spoken by nearly the whole population. The country's long-term development goals are set out in *Vision 2030*, which aims to transform Kenya into a newly industrializing, middle-income country providing a high quality of life to all its citizens by 2030 in a clean and secure environment.

Four in every ten Kenyans are aged 3-17 and are of pre-primary, primary and secondary school going age. As at 2017, Kenya's population was estimated at 46.6 million, reflecting a 12 percent growth rate between 2013 and 2017. Table 1 presents the evolution of total population and Gross Domestic Product (GDP). The official school age is classified as follows: 3-5 for ECDE, 6-13 for primary, and 14-17 for secondary. The school-age population grew by a 7.3 percent between 2013 and 2017. This has an implication on the provision of education and employment opportunities for young people.

Table 1: Total Population and School-age Population (million)

	2013	2014	2015	2016	2017*
Total Population	41.788	42.961	44.163	45.4	46.6
Population (3-17)	17.271	17.682	17.918	18.142	18.523
3-17 as percent of total population	41.3	41.2	40.6	40.0	40.0

Source: Kenya Economic Survey Series (*Estimates)

Kenya's economy has recorded a relatively steady growth over the period 2013-2017. In constant 2014 prices, the economy increased by 24 percent, from GDP of close to KES. 4.8 trillion in 2013 to about KES. 7 trillion in 2017. Real GDP annual growth rate averaged 5.6 percent, declining from 5.9 percent in 2016 to 4.9 percent in 2017. The average wealth of Kenyans increased steadily over the period 2012-2017. In real terms, the GDP per capita increased by 11 percent, from KES. 87,000 in 2013 to KES. 96,000 in 2017 (**Error! Reference source not found.**).

Table 2: Gross Domestic Product

	2013	2014	2015	2016	2017*
GDP at Market Prices (KES Bn)	4,745	5,402	6,084	7,194	7,749
GDP Constant (2014 KES Bn)	5,086	5,357	5,660	5,989	
Growth of GDP at Constant Prices	5.9	5.4	5.7	5.9	4.9
GDP per capita current (KES)	113,539	125,757	142,316	158,576	166,314
GDP per capita constant (KES) (2014)	87,261	89,430	91,989	94,789	96,800

Source: Economic Survey Reports (2014 - 2016)

(*Estimates)

2.2 Public Resources and Spending

Kenya's fiscal out-turn during the financial years 2012/13 to 2018/19 shows that expenditures were above revenues by about 8 percentage points. Table 3 below shows the evolution of government revenue less grants and loans as a share of the GDP. Over this period, total revenues, excluding grants, averaged about 19 percent of GDP and are forecasted to stay that way for the foreseeable future. During the same period, total government spending averaged 26 percent of GDP, about 8 percentage points above revenues. Recurrent spending takes the largest share of government spending.

Table 3: Government Resources and Spending as a Percent of GDP

	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Total revenues excluding grants	19.9	19.6	18.8	19.1	22.1
Total government expenditure	30.4	33.6	30.4	30.1	35.9

Source: Kenya National Bureau of Statistics, The National Treasury

2.3 Social and Humanitarian Context

Table 4 shows selected social indicators for Kenya. The country recorded marginal growth in the Human Development Index (HDI), from 0.53 in 2010 to 0.56 in 2015. The expected and mean years of schooling, however, have been stagnant over time, remaining at 11 and 6 years, respectively. On life expectancy, Kenyans are living relatively longer, as life expectancy at birth increased from 62.9 years in 2010 to 66.6 years in 2015. On the other hand, fertility rates (births per woman) reduced from about 4.4 in 2010 to about 3.9 in 2015. Another factor is that Kenya is still a rural based country, with close to three quarters of its population living in rural areas. Among those living in urban areas, slightly more than half, 56 percent, live in urban slums. In relation to HIV, prevalence among 15-49 year olds is estimated at 5.6 percent. On unemployment, Kenya recorded 39.1 percent unemployment rate according to a recent report by the United Nations; Human Development Index (HDI), 2017. This is higher than unemployment rates in Ethiopia, Tanzania, Uganda and Rwanda.

Table 4: Kenya Basic Social Indicators

Indicator Name	2010	2011	2012	2013	2014	2015
Human Development Index (HDI)	0.53	0.54	0.54	0.55	0.55	0.56
Education						
Primary education, duration (years)	6.0	6.0	6.0	6.0	6.0	6.0
Expected years of schooling	11.1	11.1	11.1	11.1	11.1	11.1
Health						

Life expectancy at birth, total (years)	62.9	64.0	64.9	65.6	66.2	66.6
Fertility rate, total (births per woman)	4.4	4.3	4.2	4.1	4.0	3.9
Mortality rate, infant (per 1,000 live births)	42.5	41.3	40.6	39.6	38.2	36.5
Population and Infrastructure						
Rural population (Percent of total population)	76.4	76.0	75.6	75.2	74.8	74.4
Mobile cellular subscriptions (per 100 people)	61.0	66.8	71.2	71.8	73.8	80.7

Source: World Development Indicators (2017).

2.4 Education Financing

Government spending on education almost doubled over the period 2010/11 to 2015/16, with over 90 percent going to recurrent spending. Table 5 shows a summary of government spending on education. Government allocation, without adjusting for inflation, increased from KES 169 billion in 2010/11 to KES 320 billion in 2015/16. However, the larger share of spending went to recurrent budget. On average, development expenditure averaged only 5.9 percent of total education spending, over this period, recording a high of 7.5 percent in 2014/15 and a low of 5.9 percent in 2012/13. Recurrent budget grew by 87 percent over the period, increasing from KES 159 billion in 2010/11 to KES 298 billion in 2015/16.

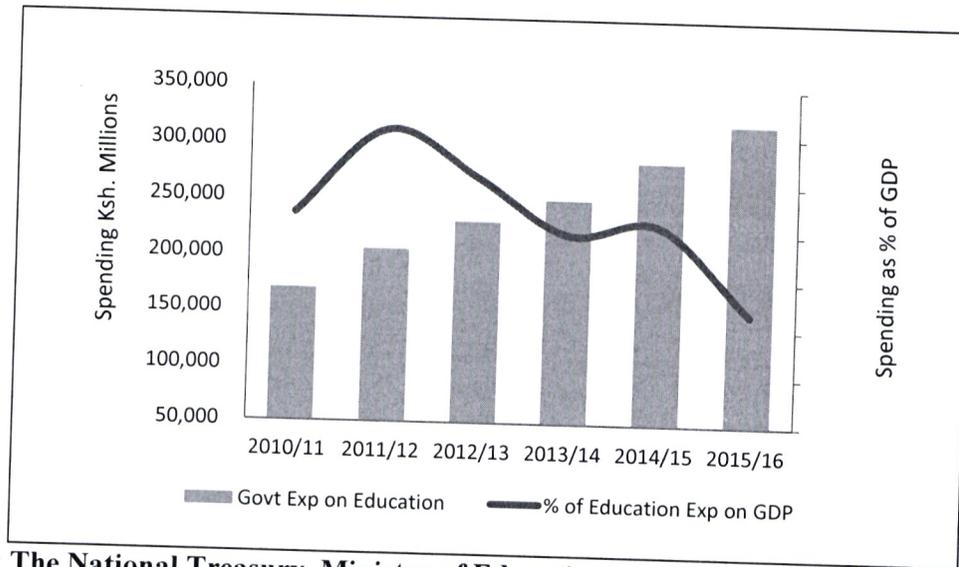
Table 5: Government Expenditure on Education (current prices)

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16 *
Government expenditure on education (KES millions)	169,093	205,262	230,599	250,551	284,792	319,425
Recurrent Expenditure	159,540	193,811	219,868	235,677	263,537	297,851
Development Expenditure	9,553	11,452	10,731	14,874	21,255	21,574
Recurrent expenditure (Percent)	94.4Percent	94.4Percent	95.3Percent	94.1Percent	92.5Percent	93.2Percent
Education expenditure as a share of total government expenditure	17.7Percent	20.2Percent	18.6Percent	16.3Percent	14.6Percent	14.4Percent

Education expenditure as share of GDP	5.3Percent t	5.5Percent t	5.4Percent t	5.3Percent t	5.3Percent t	5.1Percent t
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Source: The National Treasury, Ministry of Education, Kenya National Bureau of Statistics, Author's calculations. *Provisional – this was the approved budget for 2015/16.

Figure 3: Government Expenditure on Education



Source: The National Treasury, Ministry of Education

While spending on education increased in current absolute terms, it dropped as a proportion of the GDP, from 5.3 percent to 5.1 percent over the period 2010/11 to 2015/16. Figure 3: presents the evolution of public spending on education. Over the review period, education spending, as a share of GDP, fluctuated moderately – increasing from 5.3 percent in 2010/11 to 5.5 percent in 2011/12 and then began a consistent descent to 5.1 percent in 2015/16. Kenya has been going through a period of infrastructural expansion and as such, the general drop in the proportion of GDP spent on education is consistent with the increased spending on roads and expansion of the energy sector as well as support to non-education functions in the County Governments. This is also reflected in the general drop in the share of education expenditure in total government spending, having dropped from a high of 20 percent in 2011/12 to as low as 14 percent in 2015/16.

One quarter of Kenya’s domestic revenue is spent on recurrent education expenditure. In Table, we show trends in education recurrent spending as a share of total government recurrent spending, as that of domestic revenue and finally, as a share of GDP for the period 2010/11 to 2015/16. Over this period, nearly 24 percent of total government recurrent expenditure went to recurrent education expenditure. Similarly, education recurrent expenditure was equivalent to about 25 percent of Kenya’s domestic revenue and about 4.9 percent of Kenya’s GDP. The high recurrent spending on education is attributed to the increased recruitment of teachers; the improvement of terms of engagement for university lecturers; and the increased per student capitation in primary and secondary education subsidy programs.

Table 6: Government Recurrent Expenditure on Education, 2010/11-2015/16 (Percent)

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16*
Education recurrent expenditure:						
- as a share of total recurrent expenditure	22.4	25.7	23.4	23.1	24.6	24.3
- as a share of domestic revenue (excluding grants)	25.9	26.8	27.4	26.5	25.4	-
- as share of GDP	5.0	5.2	5.2	5.0	4.9	4.8

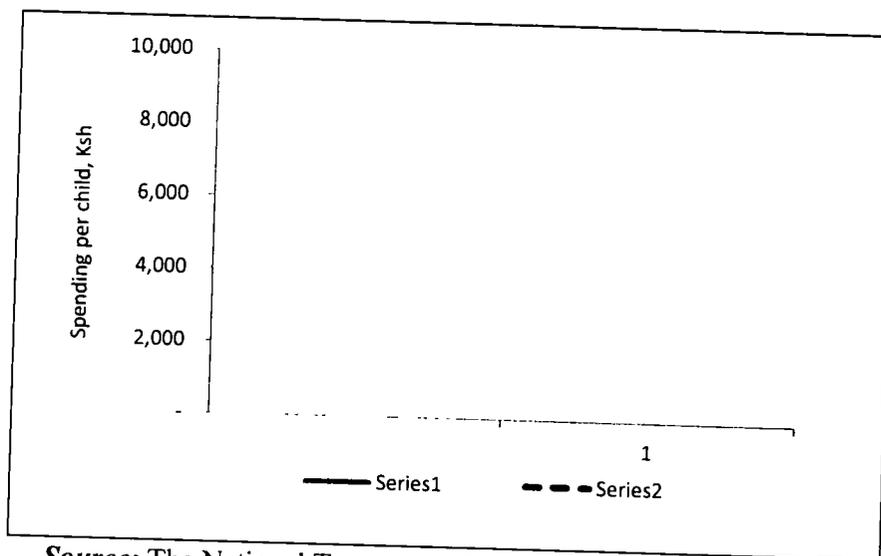
Source: The National Treasury, Ministry of Education, Kenya National Bureau of Statistics, Author’s calculations. *Provisional – this was the approved budget for 2015/16.

2.5 Per Capita Spending in Education

Despite the increase in size of education expenditure, real average (public/government) spending (per capita spending) on education per child in the population has remained the same since 2011. Figure 4: presents the evolution of government spending per child in current and constant prices. To calculate per child spending, we divide total recurrent expenditure on education with the total school age population (3-17). At market prices, spending per child

increased by 13.4 percent, from about KES. 10,000 in 2010 to KES. 16,000 per child in 2015. In constant 2014 prices, per student spending has remained constant over the last four years.

Figure 4: Per Capita Spending



Source: The National Treasury and Kenya National Bureau of Statistics

2.6 Education Spending by Functional Classification

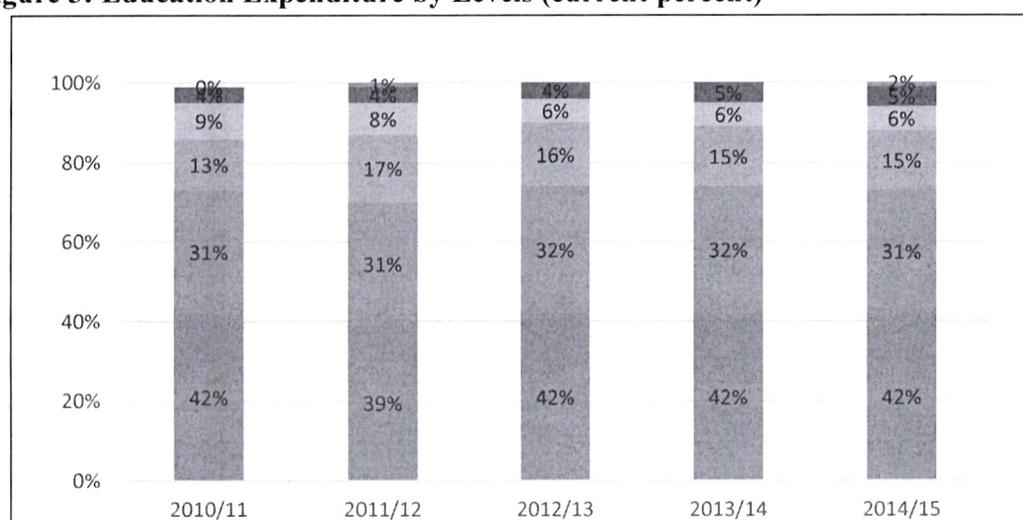
The primary sub-sector remains the highest consumer of education budget. Table 7 presents spending by education level as well as combined administrative costs (also shown in Figure 5 as percentages of the total). The primary sub-sector, which includes spending on teacher salaries, takes the highest share of sector spending. The second largest spender is secondary sub-sector, which accounts for about 30 percent of the total sector expenditure. With the operationalization of devolved governments, ECDE expenditure has increased considerably but still constitutes only 2 percent of the entire education expenditure. This implies that about three quarters of education expenditure in Kenya is directed to basic education (ECDE, primary and secondary education), driven mainly by education subsidy programs as well as salaries for teachers. Spending on the university sub-sector ranged from 13 percent to 17 percent while TVET accounts for about 5 percent of total education expenditure.

Table 8: Education Expenditure by Levels (current KES millions)

	2010/11	2011/12	2012/13	2013/14	2014/15
Administrative Services	15,943	17,118	13,825	15,573	17,137
ECDE	405	1,687	1,687	1,675	5,073
Primary	71,546	80,184	96,409	104,062	118,590
Secondary	52,780	63,595	73,119	79,230	87,108
TVET	6,836	8,090	9,686	13,133	14,603
University	21,583	34,589	35,873	36,877	42,281
Grand Total	169,093	205,263	230,599	250,550	284,792

Source: The National Treasury, Ministry of Education, Kenya National Bureau of Statistics

Figure 5: Education Expenditure by Levels (current percent)



Source: The National Treasury and Ministry of Education

Recurrent spending takes the lion's share of spending even within the sub-sectors. In almost all sub-sectors, over 80 percent of spending goes to recurrent expenditure. For instance, 97 percent of spending at primary level is recurrent spending (Table 9). In the FY 2010/11 and 2011/12, almost all spending with TVET was dedicated to recurrent expenditure. In 2014/15, there was a dramatic fall in the share of recurrent spending in ECDE mainly due to the capital spending in the form of new school infrastructure in the sub-sector at the county levels.

Table 9: Recurrent Expenditure by Level of Education

	2010/11	2011/12	2012/13	2013/14	2014/15
Spending (KES millions, current)					
Administrative Services	13,064	12,762	12,124	12,104	15,209

ECDE	380	1,678	1,678	1,675	2,180
Primary	69,145	78,686	94,911	102,571	115,049
Secondary	51,369	61,385	70,909	75,583	84,852
TVET	6,836	8,090	7,946	9,624	10,206
University	18,746	31,210	32,300	34,119	36,042
Total	159,540	193,811	219,868	235,676	263,538
<i>Spending (percent of total)</i>					
Administrative					
Services	82	75	88	78	89
ECDE	94	99	99	100	43
Primary	97	98	98	99	97
Secondary	97	97	97	95	97
TVET	100	100	82	73	70
University	87	90	90	93	85

Source: The National Treasury, Ministry of Education, Kenya National Bureau of Statistics. Percent of total is the share of recurrent spending as percent of total sub-sector spending.

2.7 Education Spending by Economic Classification

Two thirds of education recurrent resources go to salaries. Table 10 shows spending by economic classification. That is, compensation to employees (salaries); grants transferrable to other education institutions or education programs implementation agencies; procurement of goods and services; and other recurrent votes. Salaries take up slightly over 60 percent of the total recurrent expenditure. Grants and transfers, which include the Free Primary Education and Free Day Secondary Education funds, as well as tertiary student grants, ranged between one fifth and one quarter of the recurrent expenditure.

Table 10: Salary and Non-salary Expenditure, 2010/11-2014/15 (KES millions)

Economic Classification	2010/11	2011/12	2012/13	2013/14	2014/15
Compensation to employees	106,120	116,384	142,148	156,392	173,465
Grants and Other transfers	31,138	50,889	50,912	52,614	57,274
Use of goods and services	5,473	3,872	4,114	4,806	4,793
Other recurrent	16,809	22,666	22,694	21,864	28,006
Grand Total	159,540	193,811	219,868	235,677	263,537
<i>as percent of total spending</i>					
Compensation to employees	66.5	60.1	64.7	66.4	65.8
Grants and other transfers	19.5	26.3	23.2	22.3	21.7
Use of goods and services	3.4	2.0	1.9	2.0	1.8
Other recurrent	10.5	11.7	10.3	9.3	10.6
Total	100.0	100.0	100.0	100.0	100.0

Source: The National Treasury, Ministry of Education, Kenya National Bureau of Statistics

Teachers' salaries account for more than 90 percent of salaries in the sector (Table 11). Teachers' salaries grew annually at an average of 14 percent between 2010/11 and 2014/16. During the financial year 2014/15, primary teachers' salaries constituted about 60 percent of the total teachers' salaries, secondary accounted for 35 percent, while teachers in teacher training colleges and TVET institutions took about 5 percent.

Table 11: Spending on Teacher Salaries, 2010/11-2014/15 (current KES millions)

	2010/11	2011/12	2012/13	2013/14	2014/15
Primary Teachers	58,330	65,995	82,219	90,330	98,379
Secondary Teachers	33,522	37,927	47,251	51,912	56,538
Post-Secondary Teachers	4,786	5,415	6,746	7,412	8,072
Grand Total	96,638	109,337	136,217	149,654	162,989

Source: The National Treasury, Ministry of Education, Kenya National Bureau of Statistics

2.8 Recurrent Costs per Pupil/Student

During the period 2010 to 2014, government recurrent spending per learner increased at the ECDE and primary sub-sectors in real terms but reduced at secondary, TVET and university sub-sectors (Table 12). In real terms, ECDE cost per pupil increased to KES 1,000 in 2014 up from KES 300 in 2010. The unit cost at primary level increased by 15 percent from KES 12,000 in 2010, to KES 14,000 in 2014. At the secondary level, costs were cut by about 14 percent over the same period. The story was the same for TVET as well as at university level, with 2014 spending being only a fraction of spending in 2010 (65 percent and 54 percent respectively). The reduction in unit costs is due to increasing enrolments against diminishing resources. Expressing the unit cost per learner, relative to GDP per capita, it is noted that primary school spending per learner remained relatively constant in relation to per capita GDP, at 10.8 percent. However, at secondary, TVET and university levels, the cost per learner as a share of GDP dropped by 9 percent, 34 percent and 83 percent, respectively.

Table 12: Student Unit Costs in Public Institutions, 2010-2014

	2010	2011	2012	2013	2014
	In constant KES 2014				
ECDE	298	1,132	990	904	1,054
Primary	11,976	12,019	13,017	13,195	13,763
Secondary	45,591	45,992	44,840	41,403	39,012
TVET	91,861	82,189	61,014	60,611	59,429
University	183,587	244,174	185,437	126,620	99,199
	In current KES				
ECDE	218	916	877	840	1,054
Primary	8,749	9,729	11,525	12,272	13,763
Secondary	33,307	37,226	39,699	38,506	39,012
TVET	67,109	66,525	54,019	56,371	59,429

University	134,120	197,637	164,178	117,762	99,199
In percent of GDP per capita					
ECDE	0.3	1.0	0.8	0.7	0.8
Primary	10.6	10.3	11.0	10.8	11.0
Secondary	40.4	39.5	37.9	34.0	31.3
TVET	81.5	70.6	51.5	49.8	47.7
University	162.8	209.8	156.6	104.0	79.5

Source: MOE

Table 13: shows the ratio of unit cost in other levels of education relative to primary education. In 2014, secondary, TVET and University learners received 2.8, 4.3 and 7.2 times more resources respectively, from the government, relative to pupils enrolled in primary education. These were all substantial reductions from 2010, when spending per student in these levels was 3.8, 7.7 and 15.3 times, respectively, the primary spending per pupil. Overall, the government increasingly spent much more per learner at ECDE and primary level and much less per student in secondary, TVET and university levels over the period reviewed but still, secondary, TVET and university learners still receive more resources than the average primary learner.

Table 13: Unit Costs in Other Public Institutions Relative to Primary Unit Cost

	2010	2011	2012	2013	2014
ECDE	0.02	0.09	0.08	0.07	0.08
Primary	1.00	1.00	1.00	1.00	1.00
Secondary	3.81	3.83	3.44	3.14	2.83
TVET	7.67	6.84	4.69	4.59	4.32
University	15.33	20.31	14.25	9.60	7.21

Source: Author's Calculations

CHAPTER 3: PHILOSOPHY, VISION, MISSION MANDATE AND GOALS OF EDUCATION AND TRAINING SECTOR

3.1 Philosophy of Education

An appropriate education system of a country is founded on a philosophy, vision and mission, which target goals pursued through clearly stated objectives. This chapter spells out the philosophy, vision, mission, goals and policy targets of the Kenyan Education system.

The education and training sector in Kenya is hinged on the philosophy ‘quality and inclusive education and training for transformation to a knowledge economy, social cohesion and sustainable development’.

The Ministry of Education will therefore focus on provision of a holistic, quality education and training that promotes the cognitive, psychomotor and affective domains as well as life skills and lifelong learning for sustainable development.

3.2 Vision

Quality, Relevant and Inclusive Education, Training and Research for Sustainable Development

3.3 Mission

To Provide, Promote and Coordinate Provision of Quality, Relevant and Inclusive Education, Training and Research for Sustainable Development

3.4 Mandate

The mandate of the Education Sector is to provide relevant and quality Education and Training that is accessible and equitable to all Kenyans in line with the Constitution of Kenya (2010), Kenya Vision 2030 and Sustainable Development Goals (SDGs).

3.5. Strategic Objectives of Education and Training

The overall goal of education is to provide quality, relevant and inclusive education and training, for sustainable development, in an effort to contribute to the building of a just and cohesive society.

The Ministry has therefore set the following strategic objectives.

- i) To enhance access, equity, quality and relevance in education, training and research;
- ii) To integrate Information Communication and Technology (ICT) in education, training and research for management, teaching and learning at all levels;
- iii) To establish, maintain and manage professional teaching and learning service for all early learning centers, primary, secondary and tertiary institutions;
- iv) To formulate, review and implement appropriate policies, legal and institutional frameworks for the Sector;
- v) To enhance mechanisms for dissemination and commercialization of research findings;
- vi) To improve data quality and sharing in education, training and research and labor market; and

- vii) To promote vibrant industry-institutional linkages in the area of skilling for employability

3.5 Guiding Principles

The sector will embrace the national values and principles pronounced in the Constitution, Public Service Values and Principles Act, 2015, relevant international instruments and applicable provisions of law.

3.6 National Goals of Education

The following are the National Goals of Education:

- i. Foster nationalism, patriotism and promote national unity.
- ii. Promote the socio-economic, technological and industrial skills for the country's development.
- iii. Promote individual development and self-fulfillment.
- iv. Promote sound moral and religious values.
- v. Promote social equality and responsibility.
- vi. Promote respect for and development of Kenya's rich and varied cultures.
- vii. Promote international consciousness and foster positive attitudes towards other nations.
- viii. Promote positive attitudes towards good health and environmental protection.

3.7 Core Values

The operational environment is governed by a desired set of core values, which constitute the desired organizational culture. The core values of the Ministry of Education include:

- i. **Integrity** - Committed to acting in an honest, accountable and transparent manner in all our undertakings.
- ii. **Professionalism** - Committed to the highest levels of achievement obtainable through competencies and critical skills.
- iii. **Teamwork** - Embrace teamwork and collaboration both within the Ministry and with all partners in the provision of education services.
- iv. **Excellence** - Committed to world class benchmarking of standards
- v. **Efficiency** - Strive to achieve the highest value of benefit from the deployment of resources, particularly to the learner.
- vi. **Innovativeness and creativity** - Committed to setting and maintaining high standards of education and training through continuous improvement of service delivery.
- vii. **Upholding cultural diversity** - Education seeks to create a cohesive society where all people live together harmoniously regardless of race, tribe, creed, or geographic area of origin.

3.8 Education Structure in Kenya

The national education system has evolved over time, with major changes having been instituted in the 1980s. In 1984, the 7-4-2-3 structure and system was replaced with the 8-4-4 system, which introduced a broad-based curriculum at all levels. The 8-4-4 system is

intended to make education more relevant to the world of work and thus produce skilled and high-level manpower to meet the demands of the economy. The scope of the 8-4-4 structure and system expanded to incorporate technical skills and pre-primary education (4-5-year-old children). The system consists of 8 years of primary school, 4 years of secondary school and 4 years of higher education. The primary education cycle caters for learners of between 6-13 years; and secondary education targets learners of 14-17 years, while university education targets learners of 18 years and above. The TVET catchment population includes youth who for some reasons do not enroll in the regular education system either at primary, secondary school or university levels. In addition, the sector offers alternative provision of basic education and training to reduce youth and adult illiteracy.

The current structure generally comprises of the following: (i) The ECDE, which covers early childhood care for 0-3 year-old children and pre-primary for 4-5 year-old children; (ii) Primary education which lasts 8 years and caters for 6-13 year-old children, leading to the Kenya Certificate of Primary Education (KCPE); (iii) Secondary education which lasts 4 years and caters for 14-17 year-olds, leading to the Kenya Certificate of Secondary Education (KCSE); (iv) TVET, which includes trade test courses in Youth Polytechnics, artisan, craft and diploma courses in technical training institutes and institutes of technology, craft and diploma courses in national polytechnics, leading to trade tests, certificates and diplomas in various disciplines and business education related courses; (v) Business and professional studies in middle level colleges are also available, leading to certificates and diplomas; and (vi) University education lasting a minimum of 4 years depending on the degree pursued, leads to a bachelor's degree and post-graduate training programmes leading to masters and doctorate degrees. In the current dispensation of the Constitution 2010, ECDE and village polytechnics is devolved to the county governments.

The implementation of 8-4-4 structure and system does not prepare the primary level graduates well enough to enter the TVET sub-sector. In addition, it does not cater for the disadvantaged, those with special needs and those outside the formal education system. Additionally, the design of the current curriculum does not facilitate accelerated learning and flexibility for diverse needs and characteristics of learners. To contribute effectively towards the industrialization process and to address the challenges, the country is in the process of reforming education and training at all levels. This Sessional Paper makes policy proposals to address key issues that constrain access, under the current system, with a view to improving access to equitable, quality and relevant basic education and training.

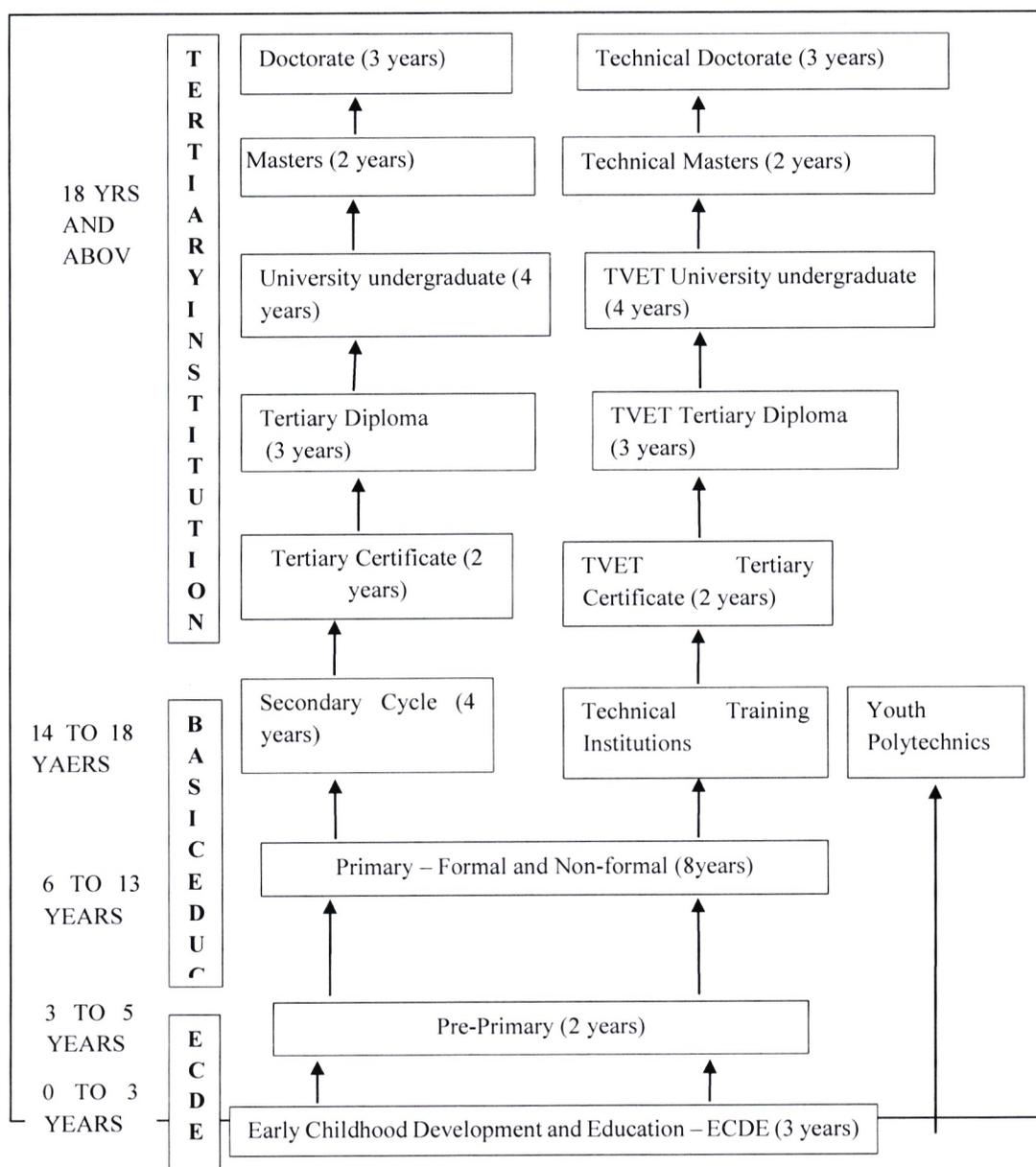
Public primary education has been free and compulsory in Kenya since 2003, with the curriculum comprising of languages, mathematics, history, geography, science, crafts and religious studies. At pre-primary and lower primary (Standard 1-3), children are expected to be instructed using the language of the catchment area. This switches to English from Standard 4. At the end of their eighth year, pupils take examinations for award of the Kenya Certificate of Primary Education (KCPE) that largely determines their progress to secondary education. Examinations are held in five subjects: Kiswahili, English, Mathematics, Science and

Agriculture, and Social Studies. Children are expected to enter secondary schools at age 14. Secondary education, which takes 4 years, is focused on both those pupils who plan to enter the labour market afterwards and those who plan to continue to higher education. At the end of year 12, secondary school students take examinations for award of the Kenya Certificate of Secondary Education (KCSE) that largely determines their progress to tertiary education.

Kenyans can join technical or vocational training programs after successfully completing primary or secondary education. TVET provides young people and the unemployed with the competencies to gain productive employment and provides those already in employment (including entrepreneurs) with an opportunity to upgrade their skills. Primary school graduates can enroll for artisan and trade programs at vocational training centres (formerly youth polytechnics) leading to a variety of diploma and certificate awards, among them a Craft Certificate. Secondary graduates, who score at least D and C- in KCSE can enroll in technical training institutes and institutes of technology leading to a variety of certificate and diploma awards, respectively. The training programs offered by technical training institutes and institutes of technology vary in duration, and with the Competence Based Education and Training Curriculum which facilitates modularized training, the duration taken will vary from a trainee to another even within the same program. For instance, some trainees may choose to pursue all modules in a given program all at once and spend three years while another may decide to complete a module, join the labour market with the skills acquired and decide to return for training at their convenient time for their career development. Students who do not go through the technical training may join other short cycle tertiary education programs, including teacher training, which lasts two years for those intending to teach in ECDE and primary schools and three years for those intending to teach in secondary schools.

Kenyans who do not join technical or teacher training programs but meet the minimum conditions for university education, are eligible for admission. Students who score C+ (an average of 6.5 points out of a possible 12) and above in KCSE, are eligible for university entry. At the university, most students take a 4-year bachelor's degree program while some take 5 or 6-year undergraduate programs. After the undergraduate course, one can take 2 years of master's and 3 years for doctorate programs, respectively. Figure 1 illustrates the structure of education system in Kenya.

Figure 1: Structure of the Education System in Kenya



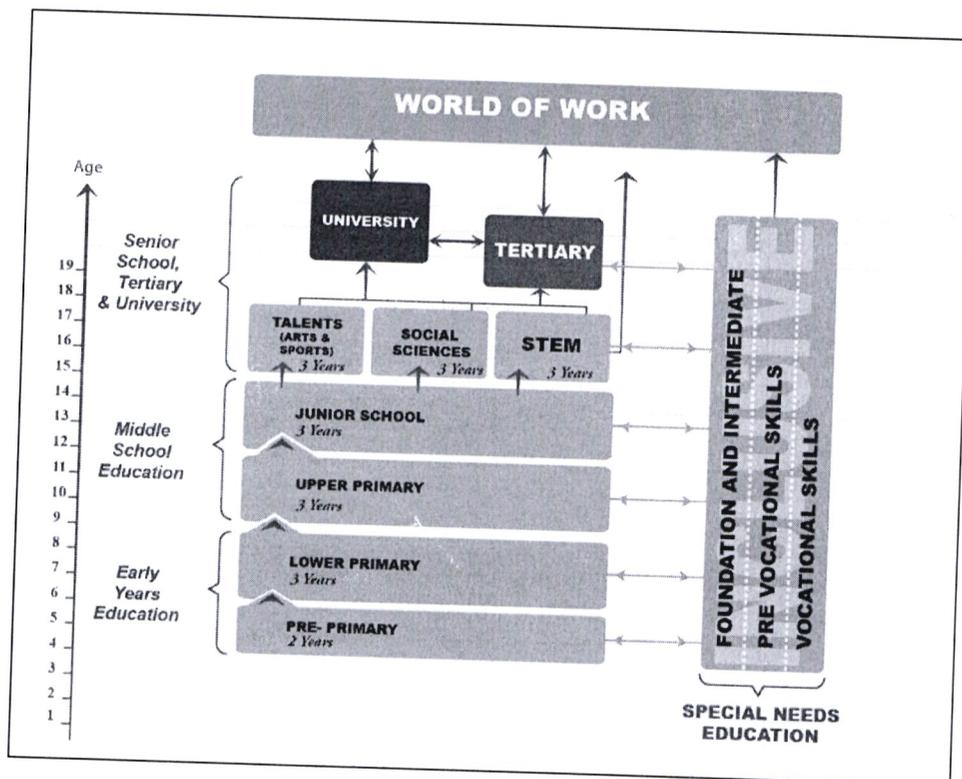
Source: MOE

3.9 Proposed Education Structure

This policy document proposes a Competence Based Curriculum (CBC) to replace the 8-4-4 system. The 8-4-4 system has been widely criticized for being heavily loaded in terms of content and being too examination oriented, putting undue pressure on learners. The CBC places emphasis on Continuous Assessment Tests (CATs) over one-off examinations. Reform of the curriculum will ensure that the skills taught in education institutions match the requirements of the industry and will also emphasize national values, integration of science and innovation and adoption of ICT technologies.

From the primary school cycle to higher levels, this structure is intended to offer learners equal opportunities to advance to the highest level of learning either through the academic or TVET channels. The proposed structure also provides opportunities for entry and re-entry into either pathway. An additional feature of the proposed structure is that the education and training system is structured into basic and higher education and training. In the long term, basic education and training is proposed to be 14 years, comprising of preprimary (2 years), primary (6 years), secondary education (6 years), and University (3 years). Under this proposal, higher education will consist of undergraduate and postgraduate (masters and doctoral) programmes, as well as TVET, diploma, undergraduate and post-graduate programmes.

Figure 2: Structure of the Proposed Education System in Kenya



Source:
KICD

Under the new Competence Based Curriculum system, basic Education will be organized into three levels: Early Years Education, Middle School and Senior School. Early Years Education includes Pre-primary and Lower Primary. Pre-primary education is for 2 years (Pre-primary 1 and Pre-primary 2 and will be for children aged between 4 and 5 years). The learners from Pre-primary 2 will join Lower Primary in Grade 1 at about 6 years of age and spend 3 years in this part of Early Years Education before joining middle school. Middle School Education will comprise three years of Upper Primary and three years of Lower Secondary education. In Upper Primary, learners will be exposed to a broad-based curriculum and will be given an opportunity for exploration and experimentation. Lower secondary will expose the learners to a broad-based curriculum to enable them to explore their own abilities, personality and potential, as a basis for choosing subjects according to career paths of interest at the senior school. Senior School comprises three years of education targeted at learners in the age bracket of 15 to 17 years and lays the foundation for further education and training at the tertiary level and the world of work. It will mark the end of Basic Education as defined in the Education Act, 2013. Tertiary and University education will last for a minimum of 3 years.

CHAPTER 4: ENHANCING ACCESS, EQUITY, QUALITY AND RELEVANCE

The government is committed to providing access to quality relevant and equitable education and training to its citizens at all levels - from pre-primary to university.

4.1 Objectives of Education at Different Levels

The objectives of pre-primary education are to:

- (i) Provide education geared towards development of the child's mental, social and physical capabilities.
- (ii) Develop the child's self-awareness, self-esteem, self-confidence and readiness for formal education.
- (iii) Enable the child develop understanding and appreciation of his/her culture and environment.
- (iv) Develop the child's exploratory skills, creativity, self-expression, discovery, aesthetic and artistic skills.
- (v) Enhance inclusion of children with special needs and disabilities
- (vi) Nurture the child's acceptable values for spiritual and moral growth as an individual and member of society.
- (vii) Promote the child's health, care and nutrition

4.1.1 Primary Education

The objectives of primary education are to:

- (i) Enhance acquisition of literacy, numeracy, creativity and communication skills;
- (ii) Develop a culture of learning and desire to continue learning;
- (iii) Develop creativity, critical thinking, problem solving and logical judgement;
- (iv) Develop appreciation and respect the dignity of work;
- (v) Prepare pupils for global citizenship;
- (vi) Develop desirable social standards, morals and religious values;
- (vii) Develop a self-disciplined, physically fit and healthy person;
- (viii) Develop aesthetic values and appreciate own and other people's cultures;
- (ix) Develop awareness and appreciation of the environment;
- (x) Develop awareness of and appreciation for other nations and international community;
- (xi) Instill respect for self and others, love for own country and the need for harmonious co-existence;
- (xii) Identify and nurture talents;
- (xiii) Promote social responsibility and make proper use of leisure time
- (xiv) Develop awareness and appreciation of the role of technology in national development.
- (xv) Promote personal hygiene and good nutritional awareness for better and healthy living

4.1.2 Secondary Education

The objectives of secondary education are to:

- (i) Develop necessary knowledge, skills and attitudes for the development of self and the nation.
- (ii) Promote love for and loyalty to the nation.
- (iii) Promote harmonious co-existence among the peoples of Kenya.
- (iv) Develop mentally, socially, morally, physically and spiritually
- (v) Enhance understanding and respect for own and other people's cultures and their place in contemporary society.
- (vi) Prepare students for global citizenship;
- (vii) Enhance understanding and appreciation of inter-relationships among nations.
- (viii) Promote positive environmental and health practices.
- (ix) Build a firm foundation for further education and training.
- (x) Develop ability for enquiry, critical thinking and rational judgement.
- (xi) Develop into a responsible and socially well-adjusted person.
- (xii) Promote acceptance of and respect for all persons.
- (xiii) Enhance enjoyment in learning.
- (xiv) Identify individual talents and develop them.
- (xv) Build a foundation for technological and industrial development.
- (xvi) Develop into self-disciplined individual who appreciates work and manages time properly.

4.1.3 Adult and Continuing Education

The objectives of Adult and Continuing Education are to:

- (i) Eradicate illiteracy among youth and adults;
- (ii) Prepare learners for global citizenship;
- (iii) Sustain and promote multiple literacy through post-literacy and continuing education programmes;
- (iv) Provide education to out-of-school youth and adults through alternative approaches;
- (v) Promote acquisition of relevant knowledge, skills and attitudes among adults to facilitate adaptation to new technologies and production skills;
- (vi) Promote self-confidence, values and positive behavior;
- (vii) Expand access, increase participation and retention in adult and continuing education and life-long learning and;
- (viii) Train local manpower for rural development through participatory, integrated development approach using multi-purpose development training institutes.

4.1.4 Special Needs Education and Training

The objectives of special needs education are to:

- (i) Increase access to education for learners with special needs and disabilities;
- (ii) Enhance retention;
- (i) Improve quality and relevance of education and training
- (iii) Strengthen early identification, intervention, assessment, referral placement and follow up services and;

- (iv) Ensure equal opportunities and gender parity in the provision of education to learners with special needs and disabilities.

4.1.5 Alternative Provision of Basic Education and Training

The objectives of alternative provision of basic education are to:

- (i) Promote literacy, numeracy, creativity, manipulative and communication skills;
- (ii) Develop appreciation of inter-dependence and ability to utilize senses for self-reliance;
- (iii) Develop into self-disciplined, physically fit and healthy person;
- (iv) Develop ability for critical thinking and logical judgement;
- (v) Provide appropriate and enjoyable experiences to motivate the learner to continue learning;
- (vi) Enhance the appreciation and respect of the dignity of work to facilitate self-employment;
- (vii) Acquire suitable foundation for the world of work in the context of economic and human resource needs of the nation;
- (viii) Develop awareness and appreciation of the role of technology in national development;
- (ix) Develop a desirable and adoptive attitude to life, based on social, moral and spiritual values;
- (x) Develop skills on environmental protection and sustainable use for individual, national and international development.
- (xi) Foster patriotism and develop awareness and appreciation for other nations and international community;
- (xii) Prepare learners for global citizenship;
- (xiii) Appreciate own and other people's cultural heritage;
- (xiv) Develop aesthetic values;
- (xv) Use leisure time responsibly and;
- (xvi) Develop individual talents and abilities.

4.1.6 Teacher Education

The following are the objectives of teacher education:

- (i) To develop the basic theoretical and practical knowledge about the teaching profession, so that the teacher's attitude and abilities can be turned towards professional commitment and competence.
- (ii) To develop in the teacher the ability to communicate effectively.
- (iii) Bearing in mind the learner as the center of learning, teacher education will prepare a teacher who can:
 - a) Provide suitable learning opportunities.
 - b) Develop the learner's communication skills

- c) Develop the individual potential abilities through a variety of creative learning experiences.
 - d) Develop the learner's sense of citizenship.
 - e) Develop the learner's ability in critical and imaginative thinking in problem solving and self-expression.
 - f) Develop positive attitude to the moral and religious values of his /her community.
- (iv) To create a national consciousness for educational excellence in every teacher
 - (v) To provide opportunities to develop special interests, skills and initiative on the part of the teacher.
 - (vi) To develop the ability to adapt to change or new situation.
 - (vii) To develop an awareness, appreciation and ability to utilize innovation. in the field of education
 - (viii) To develop awareness of principles that underline good human relationship and use of these principles in dealing with the children and community
 - (ix) To promote national unity, national development and social equality.
 - (x) To foster in the teacher an appreciation and respect for Kenya's rich and varied cultural heritage.

4.1.7 Technical Vocational Education and Training

The main objective of TVET is to develop an effectively coordinated and harmonized TVET system that can produce quality skilled human resource with the right attitudes and values required for growth and prosperity of the various sectors of the economy. Specific objectives of TVET are to:

- (i) Provide adequate and appropriate skilled Artisans, Craftsmen, Technicians and Technologists at all levels of the economy through practical training and work experience;
- (ii) Transfer technology continuously through collaborative approach between TVET institutions and the relevant industries;
- (iii) Promote dignity and decency of labour, particularly manual work;
- (iv) Provide increased training opportunities for the increasing school leavers and other trainees to increase employability;
- (v) Provide continuous upgrading of skills and knowledge at the pace and ability of the trainees;
- (vi) Provide a dynamic curriculum responsive to the manpower needs of a dynamic economy;
- (vii) Impart marketable skills, technical know-how and attitudes that respond to contemporary labour market demands by the industry, informal sector and for self-employment;
- (viii) Build on gains acquired in prior learning by promoting and sustaining entrepreneurial and technological innovations among the youth in TVET;
- (ix) Re-direct the potential of learners towards productive economic activities and

- (x) Provide life skills to learners that will enable them to cope with the challenges of adulthood and working life.

4.1.8 University Education

To realize the stated vision and mission, the objectives of university education are to:

- (i) Promote socio-economic development in line with the country's development agenda;
- (ii) Achieve manpower development and skills acquisition;
- (iii) Promote the discovery, storage and dissemination of knowledge;
- (iv) Promote research, innovation and application of innovation to development and;
- (v) Contribute to community service

4.2 Status of Access, Equity, Quality and Relevance in Education and Training

The Government recognizes that education and training of all Kenyans is fundamental to the success of the Kenya Vision 2030 and enabler to the 'Big Four Initiatives'. In order to realize the national development goals, relevant and quality education and training is required to meet the human development needs of a rapidly changing and a more diverse economy. However, major challenges remains, in ensuring and enhancing access, equity, quality and relevance in education and training as well as efficient utilization of education resources. Stated below are highlights of status as well as strategies to improve access, quality and relevance in the sector.

Pre-Primary

The provision of ECDE involves households, communities and Government efforts in the holistic development of 0-5-year-old children. The Constitution of Kenya, 2010 under Fourth Schedule distributes the functions of ECDE between the National and County governments. The structure of ECDE provision is divided into: 0-3 years and 4-5-year-old children. The first phase (child care, ages 0 to 3 years), is under full responsibility of parents, local communities and county governments. The MOE's policy is to focus on 4-5-year-old children with a view to providing a holistic and integrated programme that meets the child's cognitive, social, moral, spiritual, emotional and physical needs. Access, equity and quality of education services in this sub-sector, are constrained by various factors which include: Marked regional disparities in access, weak inter-sectoral coordination, inadequate number of pre-primary and day care centres, limited play, teaching and learning materials, limited community participation, low morale of teaching staff, poor enforcement of standards in pre-primary institutions, inadequate nutrition and health support services such as school meals. Teaching in pre-primary mainly focuses on literacy and numeracy skills meant for early primary education hence does not respond to the needs of the 4-5-year aged children.

Enrolments in pre-primary centers increased from 2.86 million in 2013 to 3.29 million in 2017, an increase of 15 percent. Despite this, access at pre-primary levels remains relatively low, especially in arid and semi-arid areas. GER increased from 71.6 percent in 2013 to 77 percent in 2017. Similarly, NER rose from 66.9 percent to 77 percent during this period. This

indicates that close to 23 percent of pre-school going children have not enrolled in ECDE centres. The number of ECDE centers increased marginally from 40,145 in 2013 to 41,779 in 2017 while the number of trained teachers increased from 83,814 to 106,938 in the same period. The number of untrained teachers decreased from 17,248 in 2013 to 11,338 in 2017.

The growth of ECDE continues to follow the decision taken by government requiring children enrolling in the first grade of primary to at least have gone through one year of ECDE. This policy position has given County Governments the impetus to invest in new centres and also opened opportunities for business community to develop ECDE models that respond to the market needs. On average, the size of an ECDE center increased by 10 units from 68 in 2012 to 78 in 2016 signaling increased demand for ECDE. The share of private ECDE centres remained around 40Percent underscoring the contribution of the private sector in delivery of this level of education.

To address these challenges, the National Government in collaboration with the County Governments will adopt the following policies:

- (i) Implement the National Pre Primary Education Policy
- (ii) Review quality standards and develop a Pre-Primary performance framework;
- (iii) Mainstream ECDE (ages 4-5 years) into the primary school system;

To implement the above policies, the National Government in collaboration with the County Governments will employ the following strategies:

- (i) Collaborate with stakeholders in ensuring that all primary schools have a functional Pre-Primary unit;
- (ii) Develop modalities to ensure synergies are created between Counties and service providers under delegated authority for Pre-Primary Education;
- (iii) Encourage service providers to synergize delivery models and techniques;
- (iv) Establish strategic partnerships with service providers to ensure provision of adequate health and nutrition support services for children between ages 0-5 years;
- (v) Develop policy on Continuous Professional Development (CPD) for teachers.
- (vi) Monitor and ensure automatic transition from Pre-Primary to primary education across the country;
- (vii) Develop quality criteria for registration of public and private Pre-Primary Centres

4.2.1 Primary Education

Kenya is a signatory to achieving the sustainable Development Goals (SDGs) by 2030. The Government's commitment to provide formal education is best evidenced by the considerable investments made in education. The Government has already adopted the principle of Child-Friendly Schools to ensure that schools do not discriminate any child based on gender, ethnicity, social class or level of ability; ensures equality of learning for all children and that schools will respect diversity.

Primary schools have recorded a 25Percent increase, private schools growing by 65Percent. Following the introduction of Free Primary Education (FPE) in 2003, the growth of private primary schools has been tremendous. The phenomenon has continued more than a decade after it was first reported. The share of private primary schools increased from 24Percent in 2012 to 31Percent in 2016. The average size of primary school reduced from 322 in 2015 to 309 in 2016.

The introduction of Free Primary Education has enhanced access to education for both boys and girls. However, acquisition of learning outcomes in literacy, numeracy and essential life skills are still low. The primary sub-sector has continued to experience many challenges which include: high pupil-teacher ratio, overcrowded classrooms, occasional teacher and pupil absenteeism, high drop-out rates, high repetition rates, increased number of orphans due to diseases such as HIV and AIDS, inadequate infrastructure, weak governance and financial management, inequitable deployment and weak management of teachers, and gender and regional disparities. The most pronounced disparities exist in arid, semi-arid areas and pockets of poverty in rural and urban areas.

It is notable that in some schools, parents have employed untrained teachers to ameliorate the shortage of teachers negatively affecting the quality of teaching and learning. There are other challenges in providing an education which takes account of spiritual, social, security, moral and cultural practices that impede access, equity and relevance.

To address these challenges, the Government will adopt the following policies:

- (i) Continue to provide free and compulsory primary education;
- (ii) Reform the Primary Education Curriculum
- (iii) Implement automatic transition and transfer between grades and across levels of Basic Education.

To implement these policies, the Government will employ the following strategies:

- (i) Require all primary schools to be Child-Friendly;
- (ii) Adopt early grade literacy pedagogy to enhance literacy
- (iii) Accelerate the employment of teachers to meet the acceptable teacher-pupil Ratio;
- (iv) Adopt a holistic approach to ensure the provision of water and sanitation in schools, immunization and regular de-worming of all school going children including at school level, feeding and registration of births at school level;
- (v) Ensure equitable deployment of teachers and introduce Continuous Professional Development (CPD);
- (vi) Review and implement Minimum Quality Standards (MQS);

- (vii) Implement the policy of inclusive education for pupils with special needs and disabilities;
- (viii) Develop a framework for opening of new schools and the expansion of the existing ones to be in tandem with the budgetary provision for teachers and infrastructure.
- (ix) Require schools and communities to identify excluded children and to ensure their enrolment.
- (x) Ensure the implementation of an all-inclusive education policy by removing all barriers to disadvantaged, hard-to-reach and vulnerable groups;
- (xi) Roll out school meals and nutrition strategy so that all children in pre-primary and primary schools are provided a midday meal through government and community supported initiatives
- (xii) Expand the school meals (feeding) programme, and encourage communities to provide the midday meal in marginalized, hard-to-reach areas and among vulnerable groups;
- (xiii) Expand, equip and strengthen mobile schools and low-cost boarding primary schools where day schools are inappropriate, to improve access and retention in Arid and Semi-Arid Lands (ASALs), marginalized, hard-to-reach and vulnerable groups.
- (xiv) Embrace alternative modes of curriculum delivery where appropriate
- (xv) Integrate the *Madrassa/Duksi* system into the formal education system in predominantly Muslim areas to improve access and retention.
- (xvi) Conduct a needs assessment to provide data for implementing alternative modes of delivering education, including home schooling;
- (xvii) Strengthen the National Council for Nomadic Education in Kenya (NACONEK);
- (xviii) Develop a framework to provide incentives for teaching staff in the marginalized and hard to reach areas;
- (xix) Sensitize parents, stakeholders and communities to discourage socio-cultural practices that prohibit effective participation of girls and boys in primary school education and enforce legislation against the violation of the Children's Rights;
- (xx) Develop and implement a strategy for identification and development of the gifted and talented;
- (xxi) Develop the capacity and effectiveness of teachers, education administrators, education managers and other stakeholders;
- (xxii) Institutionalize result-based performance management for all teachers including the introduction of performance contracts;
- (xxiii) Revise the curriculum to make it competency based and integrate ICT in the education system;
- (xxiv) Strengthen affirmative action to address the needs of the marginalized, gender, minorities, special needs and those in difficult circumstances;
- (xxv) Mobilize adequate resources for the construction and rehabilitation of schools and provide equipment to needy areas, especially in ASALs and urban slums to attain equity.

4.2.2 Secondary Education

The Government is implementing measures to improve access and quality in secondary education through Free Day Secondary Education (FDSE) programme and infrastructure improvement grants. This has led to increased enrolment from 2.0 million in 2013 to 2.8 m in 2017. The secondary Gross Enrolment Rate (GER) increased from 54.3. Percent in 2013 to 69.0 Percent in 2017 while the NER increased from 38.5 to 51.1 in the same period. This implies that approximately 50 percent of secondary school going age children are not enrolled in secondary schools. There are marked disparities in access to secondary schools. For instance, secondary completion in North Eastern and Coast regions is about 3 times less than in Central and Nairobi. In the North Eastern and Coast regions, more than 7 out of 10 do not attend up to the end of secondary education. The transition rate also increased from 76 Percent in 2013 to 84 Percent in 2017. The total number of secondary schools increased from 8034 in 2013 to 10655 in 2017. Teacher shortage has been growing over the years primarily due to increasing number of schools because of increased enrolment.

Provision of secondary education is inhibited by various factors including: extreme poverty in households, direct costs of secondary education, shortage of teaching staff, inadequate and dilapidated infrastructure facilities, gender disparity, distance from schools, insecurity, absence of multiple education pathways, special needs and disabilities, HIV and AIDS pandemic and inhibitive cultural practices.

Inequitable distribution of teachers, teaching and learning resources exists between National, extra-county and sub-county categories of secondary schools. The Government is progressively addressing the issue of equitable utilization of teachers across all education institutions.

Youth in Arid and Semi-Arid lands, marginalized, and hard to reach areas and informal settlements are further disadvantaged by the limited number of schools and school places available, the costs thereof, and the perceived inappropriateness of the curriculum. Regional disparities present a major challenge in making quality secondary education affordable in all parts of the country.

Learners in exiting secondary schools have limited skills and abilities to join the world of work, trade or to join middle and tertiary level education. The MoE has put measures towards reforming the secondary school curriculum with the emphasis shifting from knowledge reproduction to knowledge production and, to make ICT central to it.

To address these challenges, the Government will adopt the following policy:

- (i) Ensure free and compulsory secondary education to all children
- (ii) Ensure 100 Percent transition from primary to secondary education.
- (iii) Reform the secondary education curriculum.

To implement the policy, the Government will employ the following strategies:

- (i) Put in place a sustainable and equitable system to ensure 100Percent transition rate from primary to secondary.
- (ii) Establish modalities to provide capitation for learners in non-public schools in the marginalized and slum areas
- (iii) Establish a basic maximum number of non-teaching staff for all schools and employment or outsourcing of essential skilled non-teaching staff either on permanent and pensionable or contractual basis to reduce the costs.
- (iv) Ensure legislation and enforcement of fees guidelines; with heavy penalties for noncompliance.
- (v) Develop a harmonized bursary kitty (The President's bursary fund; MOE, county and CDF bursary funds; Jomo Kenyatta Foundation, the Equity and other banks programmes,), to support needy students in boarding schools;
- (vi) Implement the National Gender Policy to reduce gender disparity.
- (vii) Increase the resource allocation for teaching and learning materials.
- (viii) Enhance funding to SNE secondary schools to implement inclusivity interventions.
- (ix) Regularly review and rationalize fees in secondary schools in order to reduce the cost burden on parents and communities;
- (x) Mobilize adequate resources for the construction and rehabilitation of schools and provide equipment to deserving areas, especially ASALs and urban slums;
- (xi) Develop community awareness and social mobilization strategy to discourage socio-cultural practices that prohibit effective participation of girls and boys in secondary school education, and enforce legislation against the violation of the Children's Rights;
- (xii) Develop and implement a strategy for the identification, development and appropriate placement of gifted, talented and vocationally orientated pupils;
- (xiii) Develop professional assessment programmes to identify children with special talents and abilities and support by offering them specialized teaching and training;
- (xiv) Put sustainable measures for automatic progression between grades and automatic transfer between levels of Basic Education;
- (xv) Develop modalities for provision of school meals programme and encourage communities to provide the midday meal in marginalized, hard-to-reach and vulnerable groups;
- (xvi) Develop linkages between basic education and TVET sector including establishment of specialized institutions; and
- (xvii) Enforce Article 53 of the Constitution to ensure free and compulsory basic education for all children.
- (xviii) Establish social support systems for the Most Vulnerable Children (MVC) in basic education.

4.2.3 Special Needs Education and Training

The government of Kenya has been committed to the provision of universal education including access to education by learners with special needs and disabilities. Special Needs Education (SNE) and Training is important for human capital development as it prepares those who would otherwise be dependents to be self-reliant. Special Needs Education and Training requires appropriate adaptations to curricula, teaching methods, educational resources, medium of communication and friendly learning environment in order to cater for individual differences in learning. Traditionally, provisions of SNE has been in special schools, integrated schools and in special units attached to regular schools. This has been skewed towards four categories: Hearing impairment, visual impairment, mentally handicapped and physical handicapped leaving out all other areas. Areas left out include learners with Autism, Gifted and Talented, Emotional and Behavioral Difficulties, Deafblind and other specific learning disabilities. More recently, provision has been extended to such children in regular schools through the review of sector policy for learners and trainees with disabilities which focuses on inclusivity. Special schools will also continue to cater for learners in difficult situations.

The major challenges inhibiting access and equity in the provision of education and training to learners with special needs and disabilities include: cultural prejudice and negative attitude, the slow implementation of guidelines on SNE policy and inclusive education, inadequate data on the number of children with special needs, inadequate tools and skills for assessing and identifying learners with special needs, inadequate funding, inadequate facilities and teachers.

To address these challenges, the government will adopt the following policies:

- (i) Provide quality and inclusive education to all learners with special learning needs.
- (ii) Strengthen assessment for early identification, placement and referrals

To implement these policies, the Government will employ the following strategies:

- (i) Implement affirmative action to enable gifted and talented learners, learners with special needs and disabilities to access quality basic education and higher education.
- (ii) Restructure Kenya Institute of Special Education (KISE), enhance its capacity and review its curriculum
- (iii) Mobilize funding for Special Needs Education and Training and other support for research in the field of special needs education;
- (iv) Develop and standardize diagnostic assessment tools to facilitate the early identification, assessment and placement of learners with special needs;
- (v) Implement inclusive education programmes in pre-service and in-service teacher training.
- (vi) Strengthen and enhance funding for Education Assessment Resource Centres at County level.
- (vii) Integrate ICT in teaching and learning for learners with special needs and disabilities;

- (viii) Strengthen the multi-disciplinary approach to support health services and assessment of learners with special needs and disabilities.
- (ix) Enforce Article 53 of the constitution to ensure free and compulsory basic education for all children.
- (x) Integrate special needs education programmes in all learning and training institutions and ensure that the institutions are responsive to the education of learners with special needs and disabilities,
- (xi) Adapt the curriculum to SNE
- (xii) Implement the sector policy for learners and trainees with disabilities (2018).

4.2.4 Adult and Continuing Education

The Government recognizes the important role played by Adult and Continuing Education (ACE) as a vehicle for transformation and empowerment of adults and out-of-school youth, aged fifteen years and above not in the formal education system. Generally, access to ACE Programs in Kenya is low and experiences both gender and regional disparities. The period between 2013 and 2017 witnessed a drop, by about 34 percent, in enrolments among learners in all ACE programs in Kenya. Enrolments by gender show that generally, there are more female than male learners enrolled in the various ACE programs across the country.

The Kenya National Adult Literacy Survey (KNALS, 2007) revealed that only 61.5Percent of the adult population and out of school youth above the age of 15 years had attained minimum literacy level, leaving 38.5 Percent (7.8 million) adults illiterate. It also revealed that only 29.6 Percent of the Kenyan adult population had attained desired mastery literacy competency. About 29.9 Percent of the youth aged 15 to 19 years and 49Percent of adults aged 45 to 49 years were illiterate. The survey further revealed high regional and gender disparities in literacy achievements with Nairobi recording the highest at 87.1Percent and North Eastern province recording the lowest at 8 Percent. The Kenya's Vision 2030 recognizes the need to have literate citizens and sets a target of increasing the adult literacy rate from the current 61.5Percent to 100Percent.

ACE programmes aim at providing knowledge and skills to adults and out-of-school youth to enable them to improve their quality of life and contribute effectively to national development. ACE is provided through the Basic Adult Literacy Programme (BALP), Post Literacy Programme (PLP), Non-formal and Continuing Education Programmes (NfCEPs) and Community education and empowerment programmes.

4.2.5 Basic and Post-Literacy Programmes

BALP and PLP programmes target imparting basic literacy, numeracy and communication skills to the out-of-school youth and adults, who do not possess them to get and sustain the newly acquired literacy skills and to assist the new literates to retain, improve and apply their basic knowledge, attitudes and skills.

4.2.6 Continuing and Special Education Programmes

The Constitution (2010) recognizes education as a human right and makes basic education free and compulsory. Every person has a right to education. The constitution further guarantees education to people with disabilities, the minorities and marginalized groups and the youth. The programme offers out-of-school youth and adults a second chance to further their education and sit for national examinations or trade tests. The special ACE programmes include the provision of literacy programmes in prisons, refugee camps, internally displaced persons and older persons in society among others. There exist virtually no mechanisms to support the youth and adults with disabilities which this policy framework will address.

4.2.7 Community, Education and Empowerment

Community education and empowerment programmes target both the literate and illiterate youth and adults who have an interest in improving their knowledge, vocational and technical skills.

Challenges that have affected Adult and Continuing Education programmes over the years include inadequate trained literacy and adult education instructors, a high turnover of staff and volunteer instructors, limited resource allocation, inadequate and inappropriate infrastructure, lack of capitation grants for instructional materials, school going children attending adult classes, gender imbalance, negative attitude and perceptions towards adult learning, inadequate teachers and learning centres, poor definition of literacy. Although the Government established the Directorate of Adult and Continuing Education to coordinate the relevant programmes, it has not been adequately resourced. As a result, access to ACE and APBET programmes are low while gender disparities are high. ACE and APBET is affected by a negative image. The lack of teaching and learning materials, the application of appropriate quality assurance mechanisms, and without coordinated service delivery, leaves the subsector in need of major reform and resourcing. A further issue concerns the transition of adult learners from primary to secondary education and the appropriateness of the curriculum.

To address these challenges, the Government policy is to Provide quality ACE and APBET services, programmes, and opportunities for lifelong learning.

To implement the above policy, the Government will employ the following strategies:

- (i) Define ACE, APBE, NFS, informal education and determine the respective roles, responsibilities and inter-connections.
- (ii) Review Adult Basic Education and Training (ABET) curriculum.
- (iii) Review and harmonize ACE and APBE policy for effective implementation.
- (iv) Implement National Qualification Framework (NQF) with clear linkages and equivalences to the formal education and training system
- (v) Harmonize all legal provisions dealing with ACE and APBET.

- (vi) Establish and implement programmes to work with other private sector partners and NGOs to mobilize funds to develop and implement targeted ACE and APBET programmes.
- (vii) Rebrand ACE programme.
- (viii) Establish mechanisms to enable open access retraining.
- (ix) Strengthen research, monitoring and evaluation of ACE and APBE programmes.
- (x) Enhance funding for ACE programs.
- (xi) Enhance mechanisms for recognition of prior learning and development of lifelong learning.
- (xii) Revise the ACE curriculum
- (xiii) Harmonize all education providers of Adult Education and Alternative provision of basic education and training
- (xiv) Review the registration guidelines for alternative provision of basic education schools
- (xv) Enhance access and participation through ICT and ODL.
- (xvi) Mainstream alternative provision of basic education centres education into formal education
- (xvii) Streamline and strengthen governance and management of alternative provision of basic education centres to enhance transparency and accountability;
- (xviii) Develop mechanisms to include youths and adults with disabilities in SNE and disabilities programmes.

4.2.8 Hard to Reach and Vulnerable Groups

Despite the gains in access and equity since the launch of FPE and FDSE there are still remain pockets within Kenyan communities which have remained unreached for a host of reasons; economic, cultural, social, geographical, environmental, and political. These groups are diversified and have different educational needs. Some of the challenges includes: few teachers with a nomadic background and a curriculum that is not flexible enough to respond to nomadic lifestyle. As a result, different strategies are required to address these challenges.

Children in informal settlements are served by few formal schools. These areas lack public utility spaces for construction of schools. Children from the informal settlements are unable to access the formal schools outside the settlements because of long distances and insecurity. This has led to proliferation of non-formal schools within the settlements for the school going age children.

The government has put measures through the establishment of National Council for Nomadic Education in Kenya (NACONEK) to oversee the implementation of policies and strategies that address challenges affecting marginalized, hard-to-reach and vulnerable groups.

To address the challenges, the government will adopt the following policy:

- (i) Make provision for equitable, quality education to Marginalized, hard-to-reach and Vulnerable Groups

To achieve the above policy, the government will adopt the following strategies:

- (i) Give incentives such as conditional cash transfers to encourage enrolment and retention in marginalized, hard to reach areas and vulnerable groups.
- (ii) Expand and finance feeder, mobile and low-cost boarding primary schools.
- (iii) Establish Pre-Primary centers in ASAL, hard to reach and vulnerable areas,
- (iv) Develop a framework to guide education interventions in ASAL and urban informal settlements
- (v) Develop a differentiated unit cost
- (vi) Develop a coherent education strategy and implementation plan to address the needs of marginalized, hard-to-reach and vulnerable Groups including those with disabilities;
- (vii) Adopt a holistic approach to pastoralist education.
- (viii) Provide flexible mode of curriculum delivery.
- (ix) Establish rescue centres to cater for vulnerable learners.
- (x) Enhance provision of capitation/development grants to all Non-Formal Education Centres/Schools and Adult learning Centres to ensure availability of funds for tuition and relevant instructional materials.
- (xi) Collaborate with other stakeholders to address issues of accommodation, infrastructure, staffing, HIV and AIDS, water, sanitation, health and nutrition.
- (xii) Promote Open Distance Learning [ODL] to enhance access.
- (xiii) Expand appropriate methods of delivery of education services including mobile schools
- (xiv) Harmonize all players (private and public) in the APBE subsector with a view to formalizing their existence.
- (xv) Develop learning resource materials to support APBET schools.

4.2.9 Technical and Vocational Education and Training

The total population of Kenya is projected to reach 60 million in 2030 from the current approximate population of 40 million. This necessitates investment and expansion of the wealth and employment creation base through enhanced productivity growth, to provide for the growing population. Kenya's demographic profile indicates a high percentage of a young population. The number of young people graduating annually from the secondary school system is increasing at a high rate. According to the national census conducted in 2009, there are over 8 million Kenyans aged between 17 and 24 years who are eligible for training in tertiary institutions. TVET institutions comprise formal and informal (Jua-Kali) TVET. There is lack of adequate data in this sub sector: Available data shows that as at 2017, there were 1,300 institutions, from 700 in 2013. Similarly, trends in student enrollment shows that the total enrolments in various TVET institutions rose from 127,691 in 2013 to 202,556 in 2017 representing a 40 percent increase over this period. There are more male than female enrolled in the different TVET courses, especially in public institutions that are STEM oriented.

The cost of TVET is increasing and requires substantial investments with a high impact on government budget and out of reach to most households. There exist social and geographical inequalities in access to TVET services which is worsened by the high poverty levels. There are also issues raised about the quality and relevance of TVET education.

Despite the progress made over the last decade in enhancing access, retention, quality, completion rates and gender parity in education and training, the TVET sector continues to face many challenges. These include: an insufficient number of trainers with pedagogical competency, inadequate number of TVET centres, limited availability of customized teaching and learning materials, limited industry participation and inadequate research support services. Other challenges include poor geographical distribution of TVET institutions, negative perception of TVET, and low enrolment of females in Science Technologies, Engineering and Mathematics STEM courses and unfriendly environment for learners with special needs and disabilities. Furthermore, there is uncoordinated admission of students to TVET institutions. There is also low enrolment in TVET institutions due to the high cost of technical training and lack of awareness. The result is that most trainees end up in cheap alternative programmes whose graduates do not acquire the requisite skills necessary for the world of work.

To address these challenges, the Government shall adopt the following policies:

- (i) Expand TVET programmes at national, county and constituency level
- (ii) Provide adequate training opportunities for accessible competency-based training

To implement these policies, the Government will adopt the following strategies:

- (i) Establish a baseline on the status of TVET in the country.
- (ii) Strengthen the centralized admissions service for TVET students;
- (iii) Expand TVET facilities targeting national priority sectors;
- (iv) Provide TVET training while ensuring affirmative action with respect to vulnerable groups, special needs and disabilities, gender, hard to reach minority and marginalized groups;
- (v) Develop flexible training framework that uses modular processes and, adoption of appropriate technologies in TVET provision;
- (vi) Enhance participation of women in TVET and gender mainstreaming through affirmative action;
- (vii) Provide career guidance and placement services to TVET students;
- (viii) Integrate aspects of Technology and Vocational Education and Training in the curriculum at all levels of education;
- (ix) Develop mechanism to streamline the registration and accreditation of TVET institutions.
- (x) Develop a strategy to implement the CBET curriculum.

4.2.10 University Education

University education plays a crucial role in national development. This sub sector comprise all the education and training offered in the highest institutions of learning leading to the award of degrees and post graduate qualifications. The Government's long-term policy is to provide a framework for a sustainable, competitive and autonomous national university system. Such a policy objective will take account of the comparative strengths of private and public institutions with the aim of reducing wastage through unnecessary duplication. It will also seek to ensure the development of a diversified financial base and enhancement of managerial independence, while at the same time paying attention to issues of relevance, and responsiveness to the market and to national priorities.

The university sub-sector has witnessed tremendous growth in the last 5 years, both private and public. Along with the growth in the number of universities has come huge growth in enrolments. Total university student enrolment increased by 64 percent from 361,379 in 2013/14 to 564,507 in 2016/17. The growth was partially driven by the increase in the number of public universities and public financing of students in private universities by the Higher Educations Loans Board. Both public and private universities attract more boys than girls. In 2013, there were a total of 33 universities (7 public and 26 private) and 24 university constituent colleges. This can majorly be attributed to the different pathways and alternative modes of delivery. The establishment of new university colleges and campuses has contributed to this growth and made university education more accessible.

Patterns of access to both public and private universities tend to reflect increasing regional, gender and socio-economic differentiation in the Country. The existing inequalities in access to education at lower levels need critical attention as they tend to be reproduced or exacerbated as one goes up the education ladder. Owing to the challenges experienced by the poor, those living with disabilities, the marginalized, and the disadvantaged, the current environment makes it difficult for such students to participate in university education.

Admissions for self-sponsored undergraduate, as well as all post-graduate students at both public and private universities are currently handled directly and solely by the individual institutions. For undergraduates who receive Government scholarships, however, the admission process is currently coordinated through the Kenya Universities and Colleges Central Placement Service (KUCCPS), collaboration between public universities and university colleges. As a result, Government Scholarships are restricted to public institutions only and are based primarily on performance, with no cognizance of financial need. Affirmative action measures are however enforced to ensure increased participation by women, learners with disabilities and students from Arid and Semi-Arid Lands (ASAL).

Most secondary school students receive limited and uncoordinated career guidance in their schools. There is also inadequate information available to the students and at the schools on the degree programme and career choices. This has resulted in poor university programme choice and or a mismatch between choice and talents.

However, challenges to access and equity remain. These include: inadequate capacity to cater for the growing demand for more places in the universities; mismatch between skills acquired by university graduates and the demands of the industry; an imbalance between the number of students studying science and arts based courses; lack of policies on credit transfers among universities; gender and regional disparities in terms of admissions and in subjects and courses undertaken; lack of programmes suitable for learners living with disabilities, lack of adequate household income as a barrier to students who have qualified and admitted to university and restriction of Government sponsorship to public universities only.

To address these challenges, the Government will implement the following policies:

- (i) Promote expansion to satisfy the demand for university places of the growing population.
- (ii) Provide incentives and create an enabling environment for an increase in the number of private universities;
- (iii) Expand Government student sponsorship to private universities and;
- (iv) Ensure that universities enroll and graduate sufficient PhDs.

To implement these policies, the Government will adopt the following strategies:

- (i) Full utilization of space in existing universities and university colleges;
- (ii) Expand open and distance education (ODL) in existing universities by leveraging on ICT to take advantage of ICT infrastructure within the Country;
- (iii) Establish the Open University
- (iv) Expand facilities in newly created university colleges.
- (v) Embark on planned development of additional public universities.
- (vi) Increase the number of PhDs graduates
- (vii) Adhere to the National Qualifications Framework by institutionalizing and harmonizing pathways into university education for non-direct secondary school leavers, students with workplace and experiential learning skills and mature entry needs.
- (viii) Establish specialized universities to train undergraduate students only and increase enrolment;
- (ix) Ensure at least 40 per cent enrolment of female students into science-based university academic programmes;
- (x) Enable institutions to increase enrolment of students with special needs through affirmative action, appropriate out-reach programmes targeting them and through pre-entry programmes;
- (xi) Continue to support the marginalized and the poor to ensure broader participation in priority programmes;
- (xii) Ensure that students who have received university admission are able to receive tuition and fees in the form of loans and/or bursaries;

- (xiii) Strengthen the Kenya Universities and Colleges Central Placement Service (KUCCPS) to handle the expanded mandate;
- (xiv) Government scholarships to be awarded based on a combination of national priority areas, student performance, student choice of programme and university, and available slots in each programme at both public and private universities.
- (xv) Create awareness amongst students and parents on university programme costs, values of scholarships as well as bursaries to allow them to make informed decisions on programme choice.
- (xvi) Provide information to students and sponsors selecting university programmes on the top up required above the face value of the scholarships;
- (xvii) Progressively reduce Government scholarships to Government loans and bursaries;
- (xviii) Maintain a revolving fund based on levels of capitation for scholarships;
- (xix) Disseminate information on career guidance to students and schools, to promote informed programme and career choice, especially as relates to employability, job creation and student ability.

Within this renewed focus, and as universities decide the right balance of courses to offer, there should be an overarching concern to promote the life chances and employability of graduates. Therefore, the needs of the industry must be in tandem with national development priorities in the context of the goals delineated in Vision 2030. The strong orientation on economic impact, however, does not come at the expense of social inclusion and equality of opportunity but through an integrated approach. TVET and Universities play a critical role in promoting national cohesion and integration, providing settings where young people and adults from different racial, ethnic, religious and social groups can come together.

Research is a core activity of universities. Research output forms the foundation of attaining the national development goals. Universities will be encouraged to increase their research grant portfolios by attracting increased funding from Government, the private sector, development partners and international organizations. Research grants will serve as an avenue to not only meet a part of recurrent expenditure, but will also support facilities development, equipment purchase, staff development thus push the boundaries of knowledge.

Challenges of quality and relevance include: inadequate facilities and appropriate teaching and learning environment; inadequate staff; weak collaboration with professional accreditation bodies; lack of external quality assurance in public universities; large class sizes; weak linkage between the competences acquired in some programmes and the demands of the market; inadequate research funding.

To address these challenges, the Government will implement the following policies:

- (i) Strengthen the Commission for University Education (CUE)

- (ii) Increase capital support to the universities to enhance institutionalization of excellence.
- (iii) Improve collaboration between industry, professional bodies and universities in determining competences of the graduates.
- (iv) Provide incentives to the private sector to invest in university education.
- (v) Increase the number of graduate researchers capable of fulfilling industrial, commercial, national needs and increase the opportunities for businesses to expand on their capability for high technology innovation and growth.
- (vi) Institute mechanisms to enhance implementation of national values, cohesion and integration.
- (vii) Increase the level of research funding available to universities.

To implement these policies, the Government will adopt the following strategies:

- (i) Revamp the operations of Commission for University Education to improve accreditation and quality assurance in university education.
- (ii) Provide financial incentives to universities to strengthen and grow academic programmes that are in line with national priority and strategic areas.
- (iii) Provide incentives to encourage the growth of the university sector and make it easier for the best providers of university education service to spread their influence across the system and the agents of change.
- (iv) Ensure that industry and professional bodies take an active strategic leadership role
- (v) Put mechanism to ensure accreditation of Universities before they admit students
- (vi) Provide incentives to the private sector, including corporate and personal tax relief, waiver on duty on donated equipment, waiver of stamp duty on donated land, among others, to encourage investment in university education.
- (vii) Encourage universities to establish vibrant alumni associations both as a key source of funds and for advice and advocacy.
- (viii) Establish specialized universities to promote and exploit innovative uses of technology.
- (ix) Promote national values, cohesion and integration in university program

CHAPTER 5: CURRICULUM AND ASSESSMENT

5.1 Relevance of the Curriculum

The National Goals of Education embodied in Vision 2030 focus on enlarging learners' "knowledge, experiences and imaginative understanding as well as developing an awareness of moral values and capacity for life-long learning. At the heart of this vision is a curriculum which will provide knowledge, skills, competencies and values to enable learners to move seamlessly from one level to another, for self-actualization and the world of work, with further academic, technical and vocational education adding value to what has been acquired through the education system.

The current primary and secondary school curriculum was reviewed in 2002, followed in 2004 by a review of the primary teacher education curriculum and the diploma teacher education curriculum in 2007. The Youth polytechnic curriculum was developed in 2007. More recently in 2008, Kenya Vision 2030 established clear priorities for reforming the curriculum, while the Constitution of Kenya (2010) and on-going changes in the broader economic environment following the signing of the East African protocol impact directly on the shape and priorities of the curriculum.

Vision 2030 calls for a curriculum, which accommodates individual and corporate social responsibility, and moral and ethical values. It also calls for the development of technical and entrepreneurial skills, competencies, skills and talents. The content of basic education, therefore, shall need to be designed to equip all learners with relevant knowledge, skills, competencies and values, enabling them to develop to their full capacity, enhance the quality of their lives, able to make informed decisions and predisposed to engage in life-long learning. Aligning the curriculum to address the aspirations of Vision 2030, the Constitution and the East African Community protocol is a national priority.

The summative evaluation of primary and secondary school curricula identified gaps in the current curricula. While the content of the curriculum addresses patriotism and national unity, it is argued that inculcating these values has been less successful because carrier subjects like history and government and religious studies are optional subjects at the secondary level. Further, much of the primary and secondary school curriculum content relegates practical skills necessary for economic development to non-examinable subjects. The acquisition of requisite practical, technological and entrepreneurial skills is not addressed and has created a situation where the study of practical and vocationally orientated subjects is regarded as the least desirable option to learners. The current curriculum has been objective but not competence based, does not give weight to values, attitudes and patriotism. The cognitive domain has been over emphasized at the expense of affective and psychomotor domains. Some aspects of curriculum are not being implemented especially if not examined e.g. Physical Education and life skills. Other challenges include inadequate ICT skills in teaching and learning, teacher centered teaching methods, inadequate utilization of teaching and

learning materials, and little innovation in curriculum delivery, poor planning and utilization of human resource resulting to teacher shortages in some subjects.

5.2 Curriculum Content

In addressing the need to construct a balanced education curriculum aligned to delivering the aspirations of Vision 2030 and the development of teachers with a different mind-set, the Government shall focus on core educational outcomes, based on content of the subject being taught, and on developing a repertoire of skills and competences required by all learners and teachers. These include:

- (i) Literacy, numeracy, and enquiry skills (the ability to read, write, compute, research and process information), and the teaching thereof;
- (ii) Thinking skills (the ability to comprehend, synthesize, evaluate and apply information), and the teaching thereof;
- (iii) Communication skills (the ability to communicate verbally, in sign language, and in writing; to talk, listen and act on directions), and the teaching thereof;
- (iv) Observation and investigative skills (the ability to find and record information, observe, review and assess), and the teaching thereof;
- (v) Application and transferable skills (the ability to make and create things, demonstrate and use skills and competencies in more than one context), and the teaching thereof;
- (vi) Social and ethical skills (the ability to understand, empathize, respond appropriately and to make wise ethical decisions), and the teaching thereof;
- (vii) Entrepreneurial skills (the ability to take independent and productive action based on an ability to review and evaluate that action), and the teaching thereof.
- (viii) Talent potential development at all levels.

To make the curriculum specifically relevant to Vision 2030; emphasis shall be focused on technology, innovation and entrepreneurship, talent development, and the need for schooling to be more closely related to self-actualization and the world of work., The provision of ICT facilities across the education sector shall be a Government spending priority because technology relies heavily on the use of ICT.

The East African Community (EAC) Partner States (The Republic of Kenya, The United Republic of Tanzania, The Republic of Uganda, The Republic of Burundi and The Republic of Rwanda) have adopted a common policy of harmonization of education systems and training curricula that will shift the focus from standard curriculum design to competency-based curriculum and assessment approach. Thus, the examination oriented Kenyan curriculum shall be revised, and in its place skills and competencies, will be assessed. The introduction of standardized criterion-based assessment and testing across the Basic Education Cycles will address this need. Further, at present, technical subjects are offered in a limited number of secondary schools only, and as a result, few students are exposed to them sufficiently or early enough.

To address these challenges the Government will reform curricula in line with relevant provisions of the Constitution 2010, aspirations of Kenya Vision 2030, the East African Community protocol, International Standards and the progressive needs of the society. The reforms shall ensure flexibility and broaden opportunities for all categories of learners. They shall also ensure both Pre-service and In-Service teachers and adequately equipped to implement the new curriculum.

To address this policy, the Government will employ the following strategies:

- (i) Undertake a major curriculum reform and the assessment thereof for basic and tertiary education to align it with the Constitution and to ensure that the goals and aspirations of Kenya Vision 2030 are met by embedding ICT within it.
- (ii) Develop a repertoire of skills and competencies necessary to inform a globally competitive economy.
- (iii) Develop a progressive assessment framework which identifies the knowledge, skills and competencies that will be assessed at basic and tertiary education levels.
- (iv) Ensure provision of quality learning and teaching materials.
- (v) Mobilize and secure funding for expansion in ICT provision across the sector.
- (vi) Strengthen school-based quality assurance mechanisms for effective delivery of the curriculum.
- (vii) Provide curriculum that integrates science technology and innovativeness on the part of the learner.
- (viii) Mobilize resources for construction of education resource centres, workshops and laboratories.
- (ix) Ensure basic education curriculum review provides linkages with TVET and Higher Learning Institutions.
- (x) Harmonize school curriculum content with teacher training curriculum
- (xi) Adopt the consecutive model of teacher training as opposed to concurrent model.
- (xii) Promote acquisition of relevant skills, knowledge and attitudes
- (xiii) Ensure development of the curriculum that will enable the learner to maintain, improve and sustain the environment.
- (xiv) Integrate principles of good governance and national values in the curriculum
- (xv) Ensure that entrepreneurship, environmental and life skills education is embedded on the curriculum across all levels.
- (xvi) Apportioning a percentage of national curriculum to meet regional needs.
- (xvii) Ensure that skills and competencies are developed in an incremental way across all subjects, including co-curriculum activities that take into consideration the age of the learner.
- (xviii) Encourage teaching of foreign languages for global competitiveness.

5.3 Assessment and Examinations

The curriculum assessment in basic education is through school based and end of school cycle national examinations. The school-based examinations are both diagnostic and for placement, to determine progression from one level to another. The national examinations at the end of cycle examinations are uniform throughout the country and are used to determine transition to the next higher level. Management of these exams is the mandate of the Kenya National Examinations Council (KNEC)

The current summative assessment at the end of primary and secondary cycle does not adequately measure learner's abilities while school-based assessment is not standardized. The current system of summative assessment at the end of the various cycles together with the limited availability of student places at secondary and higher education level dictates the teaching/learning process towards examinations as opposed to assessment of attainment of skills and competences. Assessment must inform teaching and learning processes that are in tandem with Vision 2030 and to enhance learner achievement, skills and competences. Further school level KNEC examinations are uniform throughout Kenya irrespective of region or the cultural /urban divide

To address the above challenges in assessment and examinations, the Government will implement a policy to standardize assessment of core learning outcomes, transferable skills and subject related knowledge.

To implement this policy, the Government will adopt the following strategies:

- (i) Restructure the Kenya National Examinations Council (KNEC) to respond to emerging global assessment trends.
- (ii) Develop standardized competency-based assessment tests items (Competence Assessment Tests (CATs), to assess core competency areas, and to align each to all specific levels within the Basic and tertiary Education cycle.
- (iii) Require basic and training education institutions to introduce regular cumulative assessment using the Competence Assessment Test items (CATs).
- (iv) Require the assessment to be centered on developing innovation creativity and entrepreneurial minds for self-reliance.
- (v) Promote recognition of national examination and competency-based assessment internationally based on NQF.
- (vi) Promote monitoring and learning achievement.

5.4 Quality Assurance and Standards (QAS)

Quality in Education is the degree to which education can be said to be of high standard, satisfies basic learning needs, and enriches the lives of learners and their overall experience of living. Developing and maintaining standards in education and promoting quality education remain a major challenge across education systems throughout the world. There is

a strong link between the quality of provision and retention rates. If parents and learners do not perceive the value of going to school and staying in school, they will leave. It is known that if learners understand and clearly perceive the link between schooling and obtaining a job, the incentive to remain in school increases.

Given the heavy investment in education (5.1 Percent of GDP), it is a matter of considerable concern because the taxpayer is not getting value for money from the education sector. While enrolment rates at primary and secondary levels have increased, learning outcomes have remained unchanged. One reason, among others, is that quality assurance and standards measures have not yielded adequate results. Minimum quality standards are not being achieved, nor are schools being regularly inspected. School managers and teachers are not being held to account

The Basic Education Act 2013 established the Education Standards and Quality Assurance Council (ESQAC) mandated to undertake issues of quality and standards through independent assessments/ inspections. The Council's functions include supervision and overseeing curriculum implantation and delivery, establishing, maintaining, and improving quality and standards in all basic education institutions and teacher training colleges. The TVET Act (2013) created TVET Authority charged with responsibility of accrediting TVET institutions and maintenance of quality assurance and standards. The authority faces several challenges: Lacks capacity and operate on leans staff mostly seconded from the other directorates. The services are not decentralized to the counties thereby impacting negatively in-service delivery. There is no clear policy on the role of the authority in quality assurance of Vocational training centres under the management of the county governments. Quality assurance in university education is vested on the Commission for University Education (CUE).

This poses challenges of how to develop and maintain the quality education standards, ensure effective supervision of curriculum delivery, inadequate human and financial resources to ensure maintenance of standards, linkage between recommendations of quality assurance department and teacher management department.

To address these challenges the Government will implement the following policy:

- (i) Establish a central system for accreditation and quality assurance in basic education.
- (ii) Support research system for education and training.
- (iii) Promote voluntary compliance to standards.
- (iv) Strengthen TVET Authority.
- (v) Strengthen CUE

To implement the above policies the government will employ the following strategies:

- (i) Review the minimum standards for basic education and training.
- (ii) Ensure maintenance and improvement of standards quality and relevance in all aspects of basic education and training.

- (iii) Promote action research in basic education and training institutions
- (iv) Enhance school Institutional Based Quality Assurance (IBQA) capacities.
- (v) Ensure the dissemination of research findings in education and training to inform education policy making and program implementation.

5.5 Mentoring, Molding and Nurturing of National Values

The Constitution 2010 prescribes the national values that need to be inculcated into all Kenyans. Education is the most reliable vehicle for this. Majority of today's learners are faced with numerous personal challenges that require them to make life-defining decisions often early in their lives. Increasingly, younger people have to handle issues dealing with sexuality, peer pressure, drug and substance abuse, harmful traditional practices and negative media influences. At the same time, they have to make sense of broader political and social changes. Providing young people with support and guidance to assist them to manage these issues effectively forms a critical part of education. The government accepts that the family and parent community have a major role to play in this regard, but nonetheless argues that education is required to provide guidance and support through the provision of life skills programmes.

In spite of pockets of good practice in some schools and institutions, guidance, counselling and mentoring services currently do not exist in sufficient depth, neither provided in a comprehensive nor coherent manner. Specifically, it does not address in a holistic way career/business guidance, personal development and educational mentoring. Teachers generally lack the skills necessary to provide this support, and there is lack of clarity on how parents and teachers and others can work together to provide life skills support and training, and advice on entry into the world of work. The Government through the Ministry of Education offers education guidance and counselling services dealing with children with learning difficulties and maladjustment. It also manages Special Schools for children with severe learning difficulties in conformity with the national special education needs policy. Pockets of good practice exist, but identification of children and provision generally is unsatisfactory. The various policies available have touched on this issue.

Other challenges faced by the government include the absence of valid data, a clear understanding of the extent of these challenges, inadequate funding for the Ministry's Guidance and Counselling Unit, and an overall lack of capacity in the nation's schools to provide both general guidance and counselling support and mentoring to all learners.

To address these challenges, the Government will:

- (i) Continue to implement commitment to the UN Convention on the Rights of the Child (CRC) (1989) and Convention of the Rights of Persons with Disability (2006).
- (ii) Review the guidance and counseling policy to include molding, nurturing and mentoring.

- (iii) Restructure provision of Guidance, Counselling, Molding and Mentoring to ensure effectiveness across education institutions.
- (iv) Require schools and teacher training institutions to implement the guidance, counselling, molding and mentoring policies, and provide materials in support of this.
- (v) Develop with sponsors, parents and faith groups, rules, guidelines and operational principles defining their partnership in this area.
- (vi) Develop guidelines and establish implementation mechanisms for peer mentoring.
- (vii) Mobilize sustainable funding for the provision of these services.
- (viii) Introduce mentoring and molding programmes in education institutions with a view to inculcating national values in order to promote national unity and cohesiveness.

Quality TVET programmes guarantee a strong link between skills learnt and the needs of the labour market, by producing graduates with superior employability. Creating flexible pathways at all levels will facilitate vertical and lateral progression of TVET students as part of lifelong learning for their employability. A deliberate effort should thus be made to ensure that the available flexible pathways provide students with skills that are relevant to the labour market, along with acceptable levels of literacy, numeracy, skills, values and attitudes. Quality assurance is therefore essential throughout the TVET system and should be integrated into all parts of the qualification system.

Since 2008, efforts aimed at harmonizing curriculum and quality of Technical, Vocational Education and Training have been less successful. The function was initially vested in the Ministry of Higher Education, Science and Technology through the Directorate of Technical Accreditation and Quality Assurance. Owing to the fragmented nature of the management and training function of TVET, the quality of training varies greatly across the various TVET providers. There is need to ensure harmonization and coordination of programs, by standardizing the quality and relevance of training in TVET institutions.

There are also challenges to do with quality assurance, curriculum design and delivery, leading to instances of training that does not meet the quality and relevance required. In addition, there has been ineffective coordination and synchronization of the TVET sector. Further, there is inadequate planning data due to weak mechanisms for conducting tracer studies and the absence of a labour market information system to provide data on skill demands.

To address these challenges, the Government shall adopt the following policy:

Assure quality in TVET on all aspects of competency-based education and training.

To implement the above policy the Government will implement the following strategies:

- (i) Streamline the management and assessment of industrial attachment process.
- (ii) Review and enforce minimum TVET trainers' qualifications including compulsory industrial attachment for TVET trainers at least every three years of service.

- (iii) Institutionalize quality assurance and accreditation system and monitoring, evaluation, reporting, and inspection in TVET.
- (iv) Establish a Labour Market Information System (LMIS) and other survey instruments for data on the actual employability of TVET graduates in partnership with industry.
- (v) Develop standards to guarantee a minimum quality for TVET and develop policies, plans and guidelines for the rebranded TVET.
- (vi) License, register and accredit all TVET institutions according to established quality standards.
- (vii) Promote quality and relevance in training according to needs within the framework of the overall national socio-economic development plans and policies.
- (viii) Develop coherent quality indicators for input, process, output and outcome measures linked to objectives to be achieved through TVET.
- (ix) Promote action research in TVET and link information gathered and analyzed from labour market surveys and other studies.

5.6 Competency Based Modular Curriculum Framework

Technical education globally now has more specialties than ever before while competitive forces in the industry demand that firms keep costs under strict controls. Facing such pressures, firms demand more from professionals at various levels of technical education both in the breadth and depth of their knowledge and skills coming from numerous knowledge domains.

TVET Act of 2013 created CDACC with the mandate of designing and developing curricular for training institutions, examinations assessment and certification. Factors noted to hamper performance and responsiveness of TVET was the mismatch between skills acquired in training institutions and demands in the industry and also offering of generic courses by training institutions as opposed to specialized training that meets industry need. In the past skills development system in Kenya followed a curriculum based on time-bound approach rather than demand driven approach. The summative evaluation in most of courses through institutional based and end of school examination cycle has been based on a centralized standard curriculum. The national examinations at the end of the cycle do not adequately measure trainees' ability and dictate teaching /learning process towards examinations as opposed to assessment of the attainment of skills and competences

In response to the changing industry demands and increasing diversity of student needs, a fundamental redesign of the curriculum has become necessary. The government has therefore formulated and developed TVET Competency Based Education and Training (CBET) Framework that forms the foundation for the new curriculum. The program will offer the required flexibility for trainees and open ways to academic, professional, occupational and area specific careers. The curricular will be industry based, demand driven and will be offered in modules. It will be developed together with the industry where the occupational standards will form the training programs. The curriculum will also be designed to facilitate the accumulation of lifelong education and training and recognition of individual learning.

Multiple providers of curriculum, examination and assessment and training services will facilitate clear pathways for professional progression to ensure global competitiveness.

In the CBET program, the trainee earns a competency by completing a determined number of courses in a module where each module comprises a complete employable skill and a certificate of competence is awarded. This will allow the learner to choose to pursue singular or multiple competencies and easy return to the college to upgrade skills. The competency-based curriculum offers the required flexibility, particularly for adult learners, and opens ways to academic, professional, occupational, and area specific careers.

In terms of increasing access, students will more easily acquire an employable skill in a relatively short time.

5.7 Skills Curriculum and Instruction Design and Assessment in TVET

Quality human resource is an important determinant of sustainable national growth and development. There is therefore, need to progressively increase the rate of generation of a high quality skilled human resource with a special focus on developing and upgrading innovation competencies within training for employment. There is weak linkage between basic education, TVET and University curriculum. Most programmes were developed long before the conception of Kenya Vision 2030 and are not well aligned to the vision. TVET education must meet the demands for innovative and market driven skills, to enhance productivity and employment. There is also a weak link among universities, research institutions, industry and curriculum developers leading to a mismatch of skills learnt and industry demands.

The present skills development system in Kenya follows a curriculum-based, time-bound approach rather than demand-driven approach. The majority of courses are designed, delivered and assessed on a centralized standard curriculum. For these courses, certification is based on completion of courses and passing examinations rather than demonstration of competency. However, there are some authorized institutions running decentralized programmes. Although there are many service providers of curriculum development and assessment within the tertiary TVET level, the reform to competency-based assessment and training will require specialized institutions and coordination. This scenario requires a reform of curriculum development and assessment, to allow for multiple providers of curriculum, examinations, and assessment and training services to ensure global competitiveness.

Most public sector technical and vocational institutes tend not to specialize in training for an economic sector, but offer a range of generic courses, which do not always correspond to the diversity of actual economic activities. The training is generally not geared towards self-employment as testing mainly evaluates the cognitive domain with minimal emphasis on the affective and psychomotor domains. TVET programmes need to be market driven and address the needs of the workplace as well as promote self-employment. Infrastructure and

equipment in TVET institutions need to be improved to correspond with the rapid technological changes. There is low adoption of ICT in TVET by teachers, trainers, lecturers and managers.

There is need for diversification of training and vertical articulation of curricula across all levels to support flexible progression pathways. The flexible pathways should be designed to facilitate the accumulation, recognition and transfer of individual learning. This can be achieved through: transparent, well-articulated outcome-based qualifications systems. The systems should offer reliable measures for assessment, recognition and validation of qualifications nationally and at the international level; exchange of information and development of trust and partnerships among all stakeholders.

To address these challenges the Government will adopt the following policies:

- (i) Support implementation of CBET in line with relevant provisions of the Constitution 2010, aspirations of Kenya Vision 2030, the East African Community Treaty, international standards and the needs of the society;
- (ii) Ensure that all courses in TVET are competency based, market-driven and address the needs of the workplace as well as promote employability, soft, generic and life skills in partnership with private sector and professional bodies;

To implement the above policies the Government will implement the following strategies;

- (i) Mainstream CBET in all training programs to enable TVET graduates acquire skills, knowledge and right attitudes to perform jobs to the required standard in collaboration with industry;
- (ii) Continue supporting reforms in TVET to shift from time bound, curriculum based training to flexible, competency based training; and supply-led to demand-driven training;
- (iii) Develop the capacity of trainers to integrate and use ICT in curriculum design, delivery and assessment;
- (iv) Regularly develop and review training curricula and Occupational Standards in collaboration with industry.
- (v) Enhance entrepreneurship and technopreneurship in all TVET programmes to promote self-reliance;
- (vi) Establish a framework for TVET trainees and trainers to be attached in industry to gain hands-on-skills and;
- (vii) Ensure the curriculum is globally competitive by linking it with the National Qualification Framework (NQF) .

5.8 Centres of Excellence

Starting from 2007, the government established 11 Centres of Excellence under the KESSP 2005 - 2010, specializing in certain selected disciplines. However, the existing programmes of excellence in these centres need reviewing to link them to national development priority areas, as identified in the vision 2030. The centres will be improved to meet the needs of modern lifestyles of a knowledge-based and “greening” society, which demands institutions to pursue and sustain global competitiveness. Under this program a center of excellence will be conceptualized as an institution with sufficient capacity and track record of providing excellent workers for an identified industry or niche sector. It is therefore important that industry plays a leading role in the recognition of excellence.

The existing centres of excellence have limited capacity to integrate production in training and to collaborate innovatively with the private sector and other institutions, as they lack adequate autonomy to make critical decisions and enter into financial contracts. Further, the establishment of a center of excellence has tremendous financial implications in attracting high-end human resource and real investment of the required state-of-the-art infrastructure.

To address these challenges, the Government will adopt the following policy:

- (i) Establish specialized centers of excellence linked and aligned with national
- (ii) Priority areas for improved multidisciplinary and multi-sectoral knowledge generation and international competitiveness.
- (iii) Encourage establishment of business incubation centers in training institutions.

To implement the above policy, the Government will employ the following strategies;

- (i) Establish state-of-the-art TVET centres of national importance that can compete at the international level with priority focus in supporting flagship projects in the areas of energy, ICT, infrastructure and automobile sectors in collaboration with the private sector.
- (ii) Develop and implement a standard for identification and recognition of regional centres of excellence in line with local needs, demands and dominant resources available.
- (iii) Establish incubation centres within selected TVET institutions

5.9 Re-Branding Technical, Vocational Education and Training

TVET sector is faced with a challenge of negative perception and poor image which has continued over a period of time. The sector is often seen as last choice education and not a preferred option in education and training. The poor image can be attributed to multiple factors related to access, equity, quality and relevance. Among the factors leading to this negative perception include, lack of specialization in TVET institutions, lack of clear

admission and progression procedures, inadequate career guidance in basic education, inappropriate infrastructure and equipment, weak staff management system, curriculum, examination and competence assessment procedures as well as low funding.

To address these challenges, the Government will adopt the following policy:

- (i) Re-brand TVET to reposition the sector to achieve the utmost contribution to the economy.
- (ii) Continue supporting the sub-sector through enhanced budgetary allocation
- (iii) Implement CBET framework

To implement this policy, the Government will employ the following strategies;

- (i) Increase employability of TVET graduates by aligning curriculum with market demands
- (ii) Enhance training specialization in TVET in line with market demands and national aspirations.
- (iii) Promote research and patenting of innovations in TVET.
- (iv) Integrate Pro.Active Job .Skill Matching by seeking business opportunities and jobs through domestic and international labour market intelligence.
- (v) Expand the scope on innovation within TVET institutions.
- (vi) Enhance the TVET image by improving programs, advertisement and
- (vii) Infrastructure, advocacy and publicity campaigns.
- (viii) Integrate role modelling and mentoring in TVET sector.
- (ix) Implement the principles of multiple entry and exit, self-paced/modular paced/modular learning, industry learning and assessment, recognition of prior learning and national recognition/accreditation for acquired competencies.
- (x) Widening industry partnerships to provide the trainees with on the job industrial attachments and exposure to real.life industry projects and applications.
- (xi) Develop new products and engage TVET students in programmes and projects of national importance.
- (xii) Promote the use of TVET research outputs in national development through adaptation and diffusion of technology in production systems and processes.
- (xiii) Promote excellence and creativity in science, engineering and technology components in TVET;
- (xiv) Provide incentives and rewards to attract gifted and talented students in TVET
- (xv) Refurbish infrastructure, improve learning environment and change the image of TVET

5.10 University Education

During the past decade university enrolment has seen a rapid expansion in both public and private universities. Patterns of access to both public and private universities tend to reflect increasing regional, gender and socio-economic differentiation in the Country. The existing inequalities in access to education at lower levels need critical attention as they tend to be

reproduced or exacerbated as one goes up the education ladder. Owing to the challenges experienced by the poor, the marginalized, and the disadvantaged, the current environment makes it difficult for such students to participate in university education.

Admissions for self-sponsored undergraduate, as well as all post-graduate students at both public and private universities are currently handled directly and solely by the individual institutions. For undergraduates who receive Government scholarships, however, the admission process is currently coordinated through Kenya University and Colleges Central Placement Service. (KUCCPS). As a result, Government Scholarships are given to both public and private institutions. Affirmative action measures are however enforced to ensure increased participation by women and students from Arid and Semi-Arid Lands (ASAL).

Most secondary school students receive limited and uncoordinated career guidance in their schools. There is also inadequate information available to the students and at the schools on the degree programmes and career choices. This has resulted in poor university programme choice and or a mismatch between choice and talents.

However, challenges to access and equity remain. These include: inadequate capacity to cater for the growing demand for more places in the universities; mismatch between skills acquired by university graduates and the demands of the industry; an imbalance between the number of students studying science and arts based courses; lack of policies on credit transfers among universities; gender and regional disparities in terms of admissions and in subjects and courses undertaken; lack of adequate household income as a barrier to students who have qualified and admitted to university and inadequate Government sponsorship.

To address these challenges the Government will implement the following policies:

- (i) Promote expansion to satisfy the demand for university places of the growing population.
- (ii) Provide incentives and create an enabling environment for an increase in the number of private universities;
- (iii) Increase funding
- (iv) Ensure that universities enroll and graduate sufficient PhDs.

To implement these policies the Government will adopt the following strategies:

- (i) Full utilization of space in existing universities and university colleges;
- (ii) Expand open and distance education (ODL) in existing universities by leveraging on ICT to take advantage of ICT infrastructure within the Country;
- (iii) Establish the Open University of Kenya
- (iv) Expand facilities in newly created university colleges.
- (v) Embark on planned development of additional public universities.
- (vi) Offer incentives that will encourage universities to graduate more PhDs students.

- (vii) Adhere to the National Qualifications Framework by institutionalizing and harmonizing pathways into university education for non-direct secondary school leavers, students with workplace and experiential learning skills and mature entry needs.
- (viii) Establish specialized universities to train undergraduate students only and accelerate enrolment.
- (ix) Ensure at least 40 per cent enrolment of female students into science-based university academic programmes.
- (x) Enable institutions to increase enrolment of students with special needs through affirmative action, appropriate out-reach programmes targeting them and through pre-entry programmes.
- (xi) Continue to support the marginalized and the poor to ensure broader participation in priority programmes.
- (xii) Ensure that students who have received university admission are able to receive tuition and fees in the form of loans and/or bursaries.
- (xiii) Avail to students and parent's information on programme costs, values of scholarships as well as bursaries to allow them make informed decisions on programme choice.
- (xiv) Provide information to students and sponsors selecting university programmes on the top up required above the face value of the scholarships;
- (xv) Progressively reduce Government scholarships to only Government loans and bursaries.
- (xvi) Continue to pay into a revolving fund based on levels of capitation that were earmarked for scholarships.
- (xvii) Require students whose tuition and fees exceed the scholarship value of their preferred programme to top-up the difference.
- (xviii) Disseminate information on career guidance to students and schools, to promote informed programme and career choice, especially as relates to employability, job creation, and student ability.

CHAPTER 6: INFORMATION COMMUNICATION AND TECHNOLOGY

6.1 Integration of Information Communication and Technology

Information Communication and Technology (ICT) is an enabler for knowledge, innovation and skills development. ICT can help to transform education and address significant challenges of access, quality, relevance and equity faced by the education system. At the same time, no economy can survive without proper investment in ICT, and already in Kenya such areas as banking, communications, tourism, and industry are almost totally dependent upon it to carry out their day to day operations in an effective and efficient manner. Public services are increasingly dependent on IT systems and on staff with suitable ICT skills and competencies. This calls for human capacity development. The Government recognizes that ICT enhances acquisition of 21st century skills when introduced at an early schooling age.

ICT in the education sector can broadly be categorized as follows:

- (i) E-Government, which aims at mainstreaming ICT to improve government operations and service delivery such as Education Management Information Systems (EMIS). These aim at strengthening the administration and management of the education system through accurate and timely data for better and informed decision-making and reporting.
- (ii) ICT Human Capacity Development; this aim to ensure an ICT literate workforce necessary to work in today's digital and knowledge economy and acquisition of future skills.
- (iii) e-Learning; Integration of ICTs in teaching and learning to enhance the quality of delivery by teachers and to enrich the learning experience of students; to foster research and innovation; to produce school graduates with the necessary skills to effectively compete in the global knowledge economy in the 21st century.
- (iv) Use of Assistive Technologies for learners with special needs.

The effective use and integration of ICTs for education transformation requires a systematic approach that depends on the following key success factors:

- (i) An inclusive policy and strategy,
- (ii) Leadership capacity at all levels of the education system,
- (iii) Appropriate and cost-effective ICT infrastructure,
- (iv) The availability of broadband internet for all schools, teacher training institutions and other education-related organizations,
- (v) Acquisition of ICT integration skills and competencies by teachers, tutors and lecturers,

- (vi) A curriculum and assessment system which incorporates a student-centered ICTs based methodologies with emphasis on the acquisition of 21st century and future skills¹,
- (vii) Availability of appropriate digital learning materials and open education resources that are aligned to the curriculum across all levels of education,
- (viii) An effective monitoring and evaluation system to provide feedback for improvement of teaching, learning and management,
- (ix) A public-private partnership approach.

There has been increased government investment in the last 10 years in ICT in education and training across all levels; tremendous increase in access to devices have been achieved. The Ministry set the roll out of ICT integration in all public primary schools targeting class one pupils though the devices are accessible to the entire school. While in secondary schools the government has been rolling out the computer for schools Programme and other partnership programmes which have increased ICT accessibility to learners. In TVET and universities there have been considerable investments in ICT. However, there has not been considerable investment in ICT integration in Pre-primary Education.

The major challenges facing ICT integration in education and training are: inadequate ICT equipment; lack of or poor internet connectivity; unreliable power supply; inadequate ICT integration capacity among educators; online Safety and security of learners; inadequate or outdated digital content; high maintenance costs of ICTs; lack of parental and community involvement in ICT matters; negative attitude towards technology; too much focus on examinations as opposed to competence attainment in our education system; and governance in the area of ICT in education.

To address the above challenges and achieve the objective of education transformation for a knowledge society, the government policies will:

- (i) Regard the funding and provision of ICT in education in all respects as a national development priority.
- (ii) Invest in professional development of teachers, tutors, trainers and lecturers
- (iii) Link investments in ICTs at all levels in the education sector to key education objectives which will be set to ensure that school leavers and college graduates have the necessary skills to contribute to the development of a modern competitive knowledge - based economy.
- (iv) Invest in appropriate ICT infrastructure, systems and human capacity development across all County and Sub-County offices to ensure results-based financing and real time information sharing for effective administration and management of the education system.

¹ Creativity, critical thinking, problem-solving, communication, collaboration, working in teams, information literacy, personal and social responsibility.

- (v) Incorporate ICT in the education of learners with special needs
- (vi) Invest in research, innovation and knowledge creation
- (vii) Invest in development and acquisition of relevant digital learning resources across all levels of education

To address the above policies, the Government shall implement the following strategies grouped in key thematic areas:

6.2 Leadership and Management

- (i) Ensure that ICTs for education are allocated specific and adequate annual budget.
- (ii) Facilitate the use of ICT to improve management and efficiency, data transfer and reporting, data security and safety.
- (iii) Set up a robust monitoring and evaluation system and promote research in ICT in education.
- (iv) Develop and implement maintenance and technical support structures through multi-stakeholder partnership for sustainability.
- (v) Strengthen NEMIS to support planning and decision making.
- (vi) Strengthen ICT pedagogical support systems through establishment of Integration and Innovation Regional Centers.

6.3 Early Childhood Development, Primary, Secondary and Teacher Training education

6.3.1 Professional Development

- i) Facilitate the identification of the required ICT competencies for Teachers, school managers, and education managers.
- ii) Ensure that educational managers at all levels have the requisite skills for ICT leadership.
- iii) Review the teacher training curriculum at pre-service to equip them with the relevant ICT skills, knowledge and competencies for effective teaching and learning.
- iv) Develop in-service ICT teacher training curriculum across all levels of education.
- v) Ensure that all teachers and teacher educators at all levels of the education system are facilitated to acquire their own ICT equipment under a one-device per teacher policy.

6.3.2 Curriculum and Assessment

- i) Enhance the curriculum and introduce 21st century skills and digital literacy across the curriculum for all levels of the education system.
- ii) Facilitate the revision of assessment approaches and strategies to ensure that 21st Century skills and digital literacy skills are taught and to test that these skills are acquired.
- iii) Facilitate the development, identification, evaluation, storage, availability and sharing of digital content that is aligned to the curriculum for all levels of education.

- iv) Develop and implement a module to teach students safe and responsible use of the internet.
- v) Develop an educational portal to provide access, in one online location, to quality teaching and learning resources, to showcase good practice and to provide digital materials for all levels of education.
- vi) Ensure that there is an accreditation and recognition system of ICT skills acquisition in education and training.
- vii) Promote development and use of online assessment platforms that ensure quality, confidentiality and integrity of tests.

6.3.3 ICT Infrastructure and Deployment

- i) Develop guidelines on specifications for ICT hardware, online resources and other appropriate software in line with the existing laws.
- ii) Collaboration with relevant MDAs to develop internet safety and security guidelines on access to digital materials, open educational resources and the use of ICTs
- iii) Undertake cost-benefit analysis of various technology configurations suitable for varied educational levels with regard to the changing nature of ICT. The availability and access to ICT should facilitate student-centered learning and the acquisition of 21st century skills at cost-effective prices
- iv) Facilitate the use of low-cost and low-energy ICT devices to increase access to ICTs and by extension access to education opportunities
- v) Collaborate with other ministries and stakeholders to review national telecommunication policies with a view to ensuring that internet service providers agree to preferential rates for broadband internet services to schools and educational and training institutions as their contribution to education.
- vi) Collaborate with relevant agencies to ensure availability of reliable and affordable electricity and fiber optic connectivity to learning institutions.
- vii) Explore the feasibility of ICT industrial development which would primarily focus on the development of local assembly/manufacturing unit for ICT hardware and locally produced educational content and resources
- viii) Develop an elaborate support structure across counties and sub-counties to facilitate maintenance and effective utilization of ICTs
- ix) Develop guidelines for disposal of ICT equipment in compliance with the regulations set by the National Environment Management Agency
- x) Develop and promote public-private partnerships for the acquisition and deployment of ICTs in educational institutions
- xi) Establish an ICT monitoring, evaluation and reporting framework to facilitate continuous improvement of the infrastructure.

6.4 Adult and Continuing Education (ACE)

The focus at this level will be to use ICTs to improve the quality of teaching and learning in all Youth and ACE centres and institutions. This will be with the goal of developing 21st Century skills of youth and adult learners according to the requirements of the Kenya Vision 2030.

To address the policies, the Government shall:

- i) Integrate ICT in literacy and numeracy through providing appropriate ICT systems, an ICT infused ACE curriculum and appropriate digital content.
- ii) Integrate ICT in ACE teachers' training to provide appropriate skills and tools for molding 21st century skills among youth and adult learners.
- iii) Use ICT in ACE data management at all levels.

6.5 Technical and Vocational Education and Training

The goal of ICT Integration in TVET is to enhance integration of ICT for quality TVET outcomes that are necessary in an all-inclusive knowledge society. This translates to equipping trainees with 21st Century skills through access to equitable and quality technical and vocational skills relevant to the labour market. To achieve this goal, the government shall:

- i) Facilitate the formulation of all-inclusive policies for integration of ICT in TVET
- ii) Ensure that all lecturers and lecturer educators in TVET are facilitated to acquire their own ICT equipment under a one-device per lecturer policy
- iii) Ensure that all students in TVET are facilitated to acquire their own ICT equipment under a one-device per student policy
- iv) Facilitate the acquisition of adequate ICT infrastructure in TVET Institutions
- v) Ensure adequate Human Resources (HR) Capacity for Integration of ICT in TVET
- vi) Enhance availability and utilization of Digital Learning Resources in the TVET system
- vii) Enable appropriate partnership to ensure that Research, Monitoring, Evaluation and Reporting on utilization of ICTs for TVET is carried out

6.6 University Education

The main goals of ICT integration at the higher education level are mainly two-fold:

- i) To promote research, innovation and knowledge creation and sharing
- ii) To increase access to higher education through e-learning or open and distance learning

The achievement of these goals depends on solid foundation of digital literacy and 21st century skills developed at the ECDE, primary and secondary school levels. To achieve these goals, the government will:

- (i) Facilitate investment in ICT infrastructure in all universities including high-end ICT facilities for research and innovation
- (ii) Promote and support high-speed connectivity to institutions of higher learning education and research
- (iii) Promote, support and facilitate industry-university linkages for research and innovation
- (iv) Facilitate all higher education students to acquire their own ICT devices
- (v) Promote and support the use of e-learning or ICTs for open and distance education to increase access to quality education
- (vi) Ensure that all university teaching staff/faculty acquire their own ICT devices for teaching and research
- (vii) Promote use of ICT in education research at the university level

6.7 Special Needs Education and Training

The following policies will be adopted to address education challenges for the special needs learners:

- (i) Use of ICTs to promote inclusion for the special needs learners, Allocation of funds for the acquisition of appropriate ICT infrastructure for the students with special needs to address the challenge of access, relevance and equity in education provision.
- (ii) Develop teachers capacity in ICT competencies to handle learners at all levels with special needs
- (iii) Provision of subsidized ICT infrastructure for the special needs learners, Promote Open and Distance Learning [ODL] using radio, television and mobile telephony to enhance access
- (iv) Allocate funds for acquisition of relevant mobile ICT devices and technologies that enhance access
- (v) Develop guidelines and minimum quality standards and specifications for ICT hardware and software for special needs learners
- (vi) Ensure adequate Human Resources (HR) Capacity for Integration of ICT in institutions handling learners with special needs
- (vii) Enhance availability and utilization of Digital Learning Resources and software for learners with special needs

6.8 Marginalized and Vulnerable Groups

The following policies will be adopted to address education challenges for the marginalized and vulnerable groups:

- (i) Use of ICTs to increase access to quality education for the marginalized and vulnerable groups
- (ii) Allocation of funds for the provision of relevant ICT infrastructure to address access, quality and equity challenges in education for the marginalized and vulnerable groups
- (iii) Use ICTs to promote alternative modes of delivery (radio, television, computers, mobile phones, satellite) to reach the marginalized and vulnerable groups
- (iv) Increase affordability of ICT infrastructure through negotiations with the providers (hardware, connectivity, software) for education rates for education institutions
- (v) Provide incentives to providers for ICT infrastructure deployment in marginalized areas

6.9 Open and Distance e Learning (ODeL)

Although there is no one definition of open and distance learning, most definitions pay attention to separation of teachers and/or learner in time and place, institutional accreditation, use of mixed media courseware (radio, television, broadcasts), two-way communication that allows teachers and learners to collaborate, possibility of face-to-face session for coaching and development of course materials. The use of ICTs for ODeL at the tertiary level is sometimes called e-learning in the narrow sense of the definition of e-Learning.

ODeL approaches to education focus on expanding access, quality and equity to education, and as such can address the demands on education as stipulated in the Constitution (2010) of Kenya and the aspirations of Kenya Vision 2030. ODeL can give learners access to education that they would not otherwise have had for various reasons. In Kenya the marginalized and hard-to-reach people live far away from educational institutions. The working class are unable to leave their work places during working hours to attend formal classes. Migration, mobile working or nomadic lifestyles are obstacles to learning in the traditional sense. Poor transport systems, limited places in the mainstream education sector restrict people's access to education. This makes ODeL an attractive alternative.

To address the aforementioned challenges, the Government will adopt the Open and Distance Learning Approaches policy across all levels of Education in Kenya.

To implement the above policy, the government will employ the following strategies:

- (i) Develop and implement an overall ODeL policy, including incorporating a legal framework;
- (ii) Mainstream ODeL in the education system in Kenya.
- (iii) Initiate the development of ODeL approaches to meet the educational needs of e-learners, online learners and distance learning students at all levels of education, and in ASAL areas, pastoral communities, marginalized groups, special needs education and non-formal education
- (iv) Develop a regulatory and legal framework for all institutions to enable them to establish open learning opportunities.

- (v) Establish partnerships with ODeL providers at national and international levels.
- (vi) Provide capacity for teachers and education managers; evaluate the outcomes of the actions to determine efficacy and effectiveness of ODeL especially e-Learning programmes.
- (vii) Establish an ODeL broadcasting station, possibly at the proposed ICTEC for transmitting ODeL programmes to all areas of the country.
- (viii) Design a framework that will ensure affordable allocation of airtime for the promotion of ODeL programmes.
- (ix) Enhance development and dissemination of educational content through education channel at curriculum development center. Fully equip the proposed ODeL satellite centres with the necessary resources and other ICT facilities.
- (x) Mobilize funds for the launching of the educational broadcasting services with outreach to all areas of the country.

CHAPTER 7: GOVERNANCE AND MANAGEMENT OF EDUCATION AND TRAINING

7.1. Governance and Management of Education and Training

Under the Constitution, education and training in Kenya is managed under a two-tier government that is the National and County Governments. The functions of National and County Governments are outlined in Schedule 4 of the Constitution. Education and Training functions of the National Government cover: education policy, standards, curriculum, examinations, granting of university charters, universities, tertiary educational institutions, institutions of research, primary schools, special education, secondary schools, special education institutions, and promotion of sports and sports education. The functions of the County Government, in relation to education, are: pre-primary education, village polytechnics, home craft centres, farmers' training centres, and child care facilities.

The overall policy leadership is vested in the Ministry of education that is headed by a Cabinet Secretary assisted by Principal Secretary in charge of state departments. Within the education sector, there are semi-autonomous agencies and the Teachers Service Commission.

7.2 Planning and Implementation

Deepening decentralization of the management of education and training services requires that the scope of authority at each level of management be well defined and that the requisite data and information management system is established for effective education planning. Currently, most aspects of basic education planning are performed at the national level with County, Sub-County and local level offices responsible for implementation. Under a decentralized system, the role of the County Education Boards in basic education, planning will be enhanced with Education Planning being institutionalized in all programmes and projects. Requisite Human Resource Capacity building will be carried out and financial resources will be mobilized to support this process.

The linkage between the provision of education and training facilities and spatial planning is weak, restricting the ability to engage in micro planning and integrating education and training needs in different parts of the country and the demand for education services into a coherent plan. Such a plan would provide a platform for ensuring that provision of education and training in Kenya is managed sustainably and equitably. A spatial framework employing GIS technology shall be used to anchor the implementation, monitoring and evaluation of education policy.

The National planning function is centered at the National Treasury which is responsible to deploy Economists and Statisticians to the Central Planning and Project Monitoring Units in Ministries. There is a critical shortage of Economists/Statisticians as the Ministry has not recruited for some time. The Ministry of Education has been gravely affected by this shortage in the Planning Units. The functions of the CPPMU include data Management, Budgeting,

Strategic Planning, and Policy Formulation, undertaking Feasibility Studies and Monitoring, Evaluation and Reporting.

With devolution, there will be increased demand in the number of basic education managers and stakeholders involved in the management of education institutions. As a consequence, it shall be necessary to decentralize certain planning functions to the county and school level. Roles and functions of these various actors in the sector shall need to be clarified to ensure that planning, management and accountability in the sector is efficient. This situation will be improved by undertaking a staffing and skills needs analysis at national and county level, and, where necessary, transferring Education Officers to the County level offices.

To address these planning challenges, the Government will implement the following policies:

- (i) Rationalize education and training management systems and structures at national and county levels.
- (ii) Institutionalize research in education and training to inform planning.

To implement and address these policies, the Government will employ the following strategies:

- (i) Develop a comprehensive framework and modalities for decentralizing education and training functions, human and financial resource management as well as decision-making authority to the county and institutional level management bodies;
- (ii) Establish a national mechanism for consultation and co-ordination of various providers of education and training services for the purpose of ensuring harmony in education planning and provision of services at all levels;
- (iii) Strengthen education planning at national, county and institutional levels;
- (iv) Undertake capacity building in data management at the national, county and institutional levels;
- (v) Entrench education planning in the education law;
- (vi) Establish guidelines for the registration of education and training institutions to ensure that construction of learning/training institutions is linked to current budgetary allocation and address the trend of un planned school construction and consequent staffing of un planned schools;
- (vii) Develop and institutionalize an efficient financial management system for education and training; customized for at national, county and institution levels;
- (viii) Establish a cadre of Education Planning Professionals for the education sector;
- (ix) Enhance capacity building programmes in collaboration with relevant institutions;
- (x) Rationalize staffing at the national level.

7.3.Governance and Management

Effective policy formulation, policy implementation and programming require timely, accurate and reliable data for evidence-based decision making. The current situation is characterized by

existence of disparate data bases serving specific initiatives and agencies. EMIS has data sets which are incomplete because of poor response rates from education and training institutions. Credible data is a critical requirement for the sector to effectively and efficiently monitor and evaluate, track, perform quality assurance, budgeting and allocation of resources, policy and planning. This demands a significant change in focus from the school as the client/customer to the learner as the principal target of attention.

While MOE and TSC structures are quite visible at the county levels, they are not well coordinated and aligned. Ideally, the goal of both MOE and TSC local level structures ensure effective service delivery and so, the two structures, given their mandates, should be properly aligned. In counties, TSC and MOE officers – although based in the same county – operate from different offices/buildings, which raises operational challenges in an already inadequately resourced sector. At the school level, the main concern for MOE is to ensure that the curriculum is effectively delivered, and quality standards adhered to. Also, MOE's interest is to ensure that funds sent to schools are used for their intended purposes. However, there is a challenge with regards to management of school resources, as deployment and transfer of teachers does not involve adequate assessment of the ability of teachers to manage school resources (financial and physical).

The sector is governed by too many institutions with overlapping roles. For instance, both TSC and MOE run parallel roles of quality assurance. On the other hand, in-service training for teachers is undertaken by multiple institutions such as CEMASTEIA, MOE, TSC, KICD and KEMI. Furthermore, the University Act and TVET Act established bodies such as TVETA, KENIA and NRF, whose functions are generally related.

To address the above challenges, the Government will employ the following strategies;

- Review the structure of education and training sector and its Agencies ;
- Review the existing policies and legal frameworks;
- Develop education quality assurance framework.

7.4. Data and Information Management System

Data and information continue to be critical in the development of the education sector. As the country years for a knowledge-based economy, everyone has set their focus on the contribution of the education sector as it is responsible for development of human capital to support the achievement of the long-term development goals and even sustain the status once achieved. The policy and planning in the sector, therefore, has to be based on evidence so that the interventions put in place for the sector's development remain grounded on facts. The data produced by the sector also helps in tracking the achievements the sector has made against the commitments it has to the public. The Ministry thus takes the production of data and information seriously and has taken considerable strides in ensuring credible, reliable and accurate data is produced for the purpose of effective policy and planning.

The existing data management practices in the sector do not support evidence-based, timely, reliable and correct data. Institutions within education sector operate in silos and use different data systems that do not talk to each other, occasioning mismatch of information and data sets. Currently, there are overlapping school level data maintained by TSC, KNEC and MOE. Each of these institutions maintains separate data sets with separate school codes for the same school, causing challenges in harmonization of the data sets. Other challenges related to data management system in the sector include: inefficient ICT infrastructure to adequately support data transactions by all entities; high costs in maintaining ICT infrastructure, inefficient data collection and monitoring processes, and reliance on aggregate data sets for planning and high-level decision making.

One recent development is the launch of the National Education Management Information System (NEMIS). The NEMIS platform has been developed and is in the operationalization phase to support digital registration of all learners. The initiative was conceptualized to manage the inconsistencies of Kenya's large and complex education sector that serves millions of learners in about 84,000 learning institutions. A vast amount of information will be collected from NEMIS, which includes but is not limited to names of learners, teachers, institutions, as well as learners' ages, parents' information, and household details. This information will be used to keep track of learners' performance and determining core factors that undermine their progress. However, NEMIS is faced by challenges that are organizational, technical and capacity in nature.

To address the above challenges, the Government will employ the following strategies;

- (i) Develop a National Education Sector Strategic Plan with short, medium and long-term objectives to direct the development of education.
- (ii) Rationalize and refocus the Semi-Autonomous Governments Agencies (SAGAs) responsible for the development and management of various aspects of Education and Training.
- (iii) Recognize and strengthen the role of Parents Associations (PA), teacher professional bodies such as the Kenya Heads Associations.
- (iv) Enhance the capacity of Board of Management (BoM) for education and training institutions.
- (v) Establish and strengthen Student Councils (SCs) for educational and training institutions with effective representation.
- (vi) Institutionalize financial tracking and auditing in education and training including management of instructional materials.
- (vii) Increase the number of county level auditors so that schools are audited at least once a year.
- (viii) License Professional auditors to support institutional audit
- (ix) Institutionalize the National Education Management Information System (NEMIS) within the education and training sector.

- (x) Ensure that final audit reports are accessible to relevant stakeholders to access the right information.
- (xi) Develop a sector wide NEMIS Coordination Policy Framework that will institutionalize data sharing, validation and usage across Ministries, Counties, Departments and Agencies (MCDAs) in policy formulation, planning, programming and budgeting functions so as to minimize duplication and enhance efficiency
- (xii) Develop unique personal identifiers for learners in education institutions for admission, capitation, tracking cohorts and individual learning outcomes.
- (xiii) Review and implement disciplinary procedures for dealing with the misappropriation of public resources.

7.5. Human Resource Development and Management

Human capital is one of the most critical resources needed for socio-economic development of an organization or nation. Successful nations and individual organizations invest heavily on human resource capacity development. Therefore, a critical mass of educated people who are equipped with appropriate knowledge, skills and attitudes is required in order to achieve the country's political, economic and social goals that are articulated in Kenya Vision 2030.

In order to remain relevant, the department of education and the organizations in education and training sector will require highly skilled and motivated personnel. This will be achieved through prioritizing funding for Human Resource Development (HRD). Apart from existence of staffing vacancies in most cadres, there is also inefficient staff management and utilization.

To implement the above policies, government will employ the following strategies:

- (i) Establish a data base of the authorized /approved staff establishment levels for basic education sector.
- (ii) Develop and institute an effective HRM policy throughout the education and training sector which will ensure that officers enjoy an acceptable work-life balance.
- (iii) The Ministry will review the regulatory framework for education management bodies for effective management of education and training institutions.
- (iv) Establish and implement minimum qualifications and competences for all levels of management in the sector;
- (v) Implement a policy of individual performance contracting linked to annual appraisal and performance pay.

7.6. Monitoring and Evaluation

The Government faces challenges with regards to conducting effective Monitoring and Evaluation (M&E) Government ministries have not fully embraced M&E, and there is a general lack of appreciation and a positive attitude towards monitoring and evaluation. Monitoring activities have not been harmonized resulting in duplication of efforts, inefficient use of resources, and inadequate appreciation of monitoring and evaluation results. Funding

for M&E is also challenge within the government. Institutions are not well sensitized to the importance of providing reliable and credible data.

To address these challenges the Government will adopt the following policy:

- (i) Develop and mainstream standard M&E system at the national, county and institutional level.

To implement the above policy the Government will employ the following strategies;

- (i) Develop a national Monitoring and Evaluation (M&E) strategy and link it with the National Integrated monitoring and evaluation framework.
- (ii) Develop and implement a score card system on key education and training indicators for monitoring at all levels
- (iii) Establish a sustainable M&E funding mechanism
- (iv) Establish an accurate baseline upon which to measure changes in the quality of education and training
- (v) Build capacity of personnel at national, county and institutional level.
- (vi) Introduce centralized information tracking system and complementary reporting systems to improve data gathering and the dissemination of results.
- (vii) Conduct Education Sector Analysis periodically

CHAPTER 8: TEACHER EDUCATION AND DEVELOPMENT

Teachers, trainers and lecturers in this context are referred to as curriculum implementers. They are an important resource in the teaching and learning process and their training and continuous professional development is pivotal to the achievement of the vision and aspirations of the country. Measures to improve teaching and learning processes so as to develop an appropriately skilled human resource for the country is necessary. A teacher or trainer refers to a person who imparts knowledge, competencies, skills and attitudes to learners and has undertaken a recognized pedagogical training program and attained accredited certification. Only trained teachers can be registered in the teaching profession.

Teacher education in Kenya is provided to meet the demands of schooling in pre-primary, primary, secondary and tertiary levels. Pre-primary and primary teacher training courses focus on pedagogy and subject knowledge content. Secondary teacher training courses is provided in two models i.e. consecutive and concurrent models. In the consecutive model, the trainees undertake the subject area first and graduate with either Bachelor of Arts or Bachelor of Science degree and later undertake a nine month postgraduate diploma to make them trained teachers. In the concurrent model, the trainees study both the subject area and pedagogy at the same time and graduate with a Bachelor of Education. However, there is no standardized content in the curriculum offered in different universities

The policy framework for teacher education needs strengthening to cater for the recruitment and career development of teacher educators as a specialized cadre within the teaching profession and provide a clear career and professional route to becoming a teacher educator.

For purposes of coherence and synergy in capacity building of education managers and curriculum implementers, the government shall establish the Kenya School of Education. The School shall provide learning and professional development programmes to build capacity in the Education Sector.

8.1. Pre-school teacher education

The pre-school teacher education sector is faced with the following challenges:

- (i) Diverse employers, majority of whom do not remunerate well resulting in high attrition rates and low morale;
- (ii) Majority of teacher trainers lack teacher education training qualifications;
- (iii) There is a discrepancy between theory and practice in pre-primary teacher education. In theory, the curriculum trains teachers to cater for the total development of the child's personality. In practice, however, teachers are put under pressure to provide the child with the academic head start needed for primary school learning;
- (iv) There is no clear career and professional route to becoming an ECDE teacher educator;

- (v) Teacher educators receive no Continuing Professional Development at the ECDE level;
- (vi) Performance contracting has not been fully embraced in the pre-primary schools and
- (vii) There is weak institutional based quality assurance in ECDE teacher training colleges.

8.2. Primary school teacher education

The primary school teacher education sector is faced with the following challenges:

- (i) There is no curriculum for teacher trainers for primary teacher training colleges.
- (ii) Majority of teacher trainers lack relevant primary school teaching experience to keep them in sync with current practice.
- (iii) The initial teacher education curriculum for primary school teachers requires periodic review to conform to classroom changing demands.
- (iv) There is no clear policy framework for teacher education at the primary level.
- (v) There is no clear career and professional route to becoming a teacher educator at the teacher training institutions.
- (vi) Lack of subject specialization in primary school teacher training.
- (vii) Emphasis on teaching and teaching methods, leaving theoretical aspects of education to be addressed in post-graduate study.
- (viii) Lack of a coordinated Continuous Professional Development of teachers and teacher educators.
- (ix) Lack of set standards for recruitment and management of teacher trainers.
- (x) Performance contracting has not been fully embraced in the primary schools.
- (xi) Weak institutional based quality assurance in primary teacher training colleges.

8.3. Secondary School Teacher Education

The secondary school teacher education sector is faced with the following challenges:

- (i) Lack of qualified university teacher trainers with relevant secondary school teaching experience.
- (ii) Lack of standardized teacher education curricula at the university level leading to discrepancies in the quality of graduates.
- (iii) The teaching profession lags in marketability hence does not attract people with a passion for it.
- (iv) Teacher educators receive no Continuing Professional Development to enable them keep abreast with the dynamic changes in the sector.
- (v) There is a weak link between teacher training colleges and higher education institutions, especially universities who train them.

8.4. Special Needs Teacher Education

The special needs teacher education sub sector is faced with the following challenges;

- (i) Teacher educators have the subject matter but are not grounded in andragogy to train special needs teachers who are already in service.
- (ii) The teachers who undertake the SNE training programme may not have the passion to handle children with special needs and are instead driven by financial gains.

To address the above challenges on teacher development, the government will adopt the following policies:

- (i) Establish teacher education and development standards, based on acceptable principles that will ensure optimal delivery of competency-based education and training.
- (ii) Modernize pre-service and in-service teacher training.

8.5. Strategies for Policy Implementation

To implement and address these policies, the Government shall employ the following strategies:

- (i) Develop guidelines for employment of teacher educators and teachers.
- (ii) Introduce compulsory internships for teacher trainers for a specified period.
- (iii) Develop a mechanism for attracting the best brains into the teaching profession to inject innovativeness in the teaching sector.
- (iv) Standardize teacher training curriculum including teaching practice.
- (v) Develop mechanisms for rebranding the teaching profession.
- (vi) Reform the teacher education curriculum to reflect the aspirations of constitution, and Vision 2030 with a shift to competency-based approach.
- (vii) Upgrade the capacity of the existing teacher educators to meet the required standards
- (viii) Expand access in TVET teacher training especially at graduate level.
- (ix) Review special needs teacher education to address the emerging issues.
- (x) Embrace research and development in teacher training.
- (xi) Develop and implement a comprehensive teacher education and training, management and professional development policy.
- (xii) Make ICT a priority area for CPD for all teachers.

CHAPTER 9: TEACHERS, TRAINERS AND LECTURERS MANAGEMENT

9.1. Teacher Management

The teacher resource is one of the most important component of any inputs into the education system and therefore, efficient management and utilization of teachers is critical to the quality of learning outcomes. Teacher management is classified into three main categories namely; entry, maintenance and exit. It is managed by institutions put in place for every level of education from ECDE to university. ECDE teachers are registered by the TSC and managed by county governments. Primary, secondary schools and teacher training institutions are managed by TSC. The commission also provides teachers to public TVET institutions under MoE. Adult and continuing education instructors are managed by the ministry of education while university lecturers are employed by respective universities.

The Constitution of Kenya (2010) established TSC as a constitutional commission. Under its mandate, the Commission ensures the establishment and maintenance of a sufficient professional teaching force that is equitably distributed and optimally utilized in public education and training institutions. The commission is mandated to: register trained teachers; recruit and employ registered teachers; deploy teachers employed by the Commission for service in any public school or institution; promote and transfer teachers; exercise disciplinary control over teachers; and terminate the employment of teachers. In addition, the Commission is mandated to review the standards of education and training of persons entering the teaching service; review the demand for and the supply of teachers and advise the national government on matters relating to the teaching profession. To discharge these tasks, the commission relies on BOMs in basic education institutions, CDEs, TSC county Directors, SCDE and TSC SCD. Currently, the Teachers Service Commission (TSC) manages teachers deployed in over 31,661 public educational institutions in the country.

Teacher management face the following challenges which include: disparities in teacher distribution and utilization, inadequate opportunities for continuous improvement in the quality of education services, shortage of teachers in some areas, non-alignment of the teacher curriculum to the Competence Based Curriculum; teacher absenteeism, poor performance in teaching subjects and quality of teacher educators.

To address these challenges the Government will adopt the following policies:

- (i) Ensure efficient and cost-effective utilization of teachers by regularly reviewing and establishing appropriate staffing norms;
- (ii) Review the current teacher training programmes with a view to establishing diploma level as the minimum level qualification for teachers
- (iii) Institutionalize teacher performance appraisal system.

To implement these policies, the government will adopt the following strategies:

- (i) Provide and maintain a sufficient, equitable and qualified teaching and training force for public education and training institutions;
- (ii) Expand opportunities for career growth and progression for teachers;

- (iii) Strengthen linkages and collaboration with teacher training institutions;
- (iv) Develop mechanisms for mapping actual teachers' specialization needs in the country
- (v) Provide continuous professional development for teachers;
- (vi) Explore and implement alternative modes of deployment of teachers for effective utilization;
- (vii) Improve teacher and trainers' registration and records management system;
- (viii) Strengthen the capacity of KICD as the national center for curriculum development, to conduct applied research that will regularly inform teacher education curriculum review;
- (ix) Establish management benchmarks for teacher management;
- (x) Develop human and technical capacity for teacher management at all levels;
- (xi) Develop a teacher training policy based on current and projected needs;
- (xii) Develop a clear guideline that links Teacher Professional Development to predictable pathways for training and career progression;
- (xiii) Develop national policy and guidelines for teacher education, development and management.

9.2. Technical and Vocational Education and Training Trainer Management

The Technical and Vocational Education and Training (TVET) Act, 2013 provides for recruitment of trainers for Public Technical Institutions. Currently the Public Service Commission (PSC) employs trainers for public TVET institutions. However, other ministries that offer TVET have mechanisms for recruiting and remunerating those who get deployed as trainers in their respective institutions. Currently public technical training institutions face shortage of trainers. To address the shortage, BoGs recruit trainers to supplement those from PSC. However, limited resources and unattractive terms of service have made attraction and retention of BoG trainers elusive. There is a marked difference in the remuneration between the two categories, leading to high turnover and understaffing. Whereas trainers recruited by PSC have a clear scheme of service and have appointments designating them as lecturers, those managed by BoGs and other employers in all the other ministries and private sector do not have a harmonized scheme of service.

Quality technical skills are a critical component of an effective TVET trainer. Education faculties in most local universities offer teacher education programs oriented to secondary school education. Although Moi University trains teachers in technology education for the TVET sector, there are no specific education programs to supply the TVET sector with trainers. Consequently, trainers qualify in disciplines other than education and then convert to teaching/ training through deployment. There is a pedagogical skills training program at the Kenya Technical Teachers College from which trainers benefit under staff development programme. The KTTC trains technical teachers already having qualified in technical fields, with most of the graduates getting jobs in TVET institutions. TVET trainers previously under TSC management will be managed by the Public Service Commission under The Ministry of Education. This is aimed at harmonizing the trainer management. Instructors in the Vocational Training colleges are however managed by the County Public Service Boards and

continue to encounter challenges especially on career progression and remuneration non-existence of clear terms of service leading to wide variations in remuneration among counties.

To address these challenges the Government will implement the following policy:

- (i) Rebrand the management of TVET trainers

To implement this policy, the government will adopt the following strategies:

- (i) Strengthen TVETA to coordinate the management and development of trainers, while TSC manages teachers in the TVET sector;
- (ii) Establish a trainer education and development standard, based on accepted principles that will ensure optimal delivery of competency-based education and training for the benefit of the trainees
- (iii) Develop TVET trainers through pre-service training and in-service exposure to continuous professional development.
- (iv) Develop a policy of trainer development for all TVET trainers to have mandatory anagogical skills.
- (v) Enhance coordination of TVET at the County level
- (vi) Review the pre-service training program aligned to the CBET
- (vii) Develop a framework for TVET trainer management;
- (viii) Develop industrial attachment framework for trainers/instructors and trainees
- (ix) Harmonize remunerations and working condition of instructors in vocational centres under the county governments.

9.3. University Lecturers Management

The human resource challenges faced by the university education sub-sector include: difficulty in attracting and retaining qualified staff especially PhD holders in all disciplines particularly those of national priority and necessary for the attainment of Vision 2030; training and retention of adequate PhD holders; ensuring that universities portray a national outlook, including at top management level.

One of the main challenges in the attraction and retention of staff to the sub-sector, especially in the public universities, is the current approach to development and implementation of terms and conditions of service for academic members of staff. Remuneration scales (for basic salaries and housing allowances) are established after negotiations between the department responsible for Education and Training with University Academic Staff Union (UASU), and are subsequently applied uniformly across all disciplines, and across all public universities. Individual universities are only able to negotiate directly with their respective union branches on other allowances paid to staff. The same process applies to all the unions representing the staff in the public universities.

This approach, however, presents two main problems. First, several disciplines are unable to neither attract nor retain adequate numbers of faculty members who can command significantly higher salaries in the private sector or in regional and international institutions.

Second, even for those universities who may be able to provide enhanced remuneration scales paid from their own income generation activities, are prevented from doing so. Therefore, university councils are unable to develop and implement comprehensive strategies for the attraction and retention of adequate numbers and quality staff.

In order to address the challenges, the Government will adopt the following policies:

- (i) Introduce Discipline Differentiated Remuneration (DDR) for academic members of staff.
- (ii) Empower public university councils to determine their own individual terms and conditions of service for their staff.
- (iii) Introduce a Government-funded teaching assistantships public and private universities for post-graduate students who would transit from undergraduate studies to attaining their PhDs and serve as teaching assistants.

CHAPTER 10: PLANNING, IMPLEMENTATION, MONITORING AND EVALUATION

10.1. Basic Education

Deepening decentralization of the management of education and training services requires that the scope of authority at each level of management be well defined and that the requisite data and information management system is established for effective education planning. Currently, most aspects of basic education planning are performed at the national level with County, Sub-County and local level offices responsible for implementation. Under a decentralized system, the role of the County Education Boards in basic education, planning will be enhanced with Education Planning being institutionalized in all programmes and projects. Requisite Human Resource Capacity building will be carried out and financial resources will be mobilized to support this process.

The linkage between the provision of education and training facilities and spatial planning is weak, restricting the ability to engage in micro planning and integrating education and training needs in different parts of the country and the demand for education services into a coherent plan. Such a plan would provide a platform for ensuring that provision of education and training in Kenya is managed sustainably and equitably. A spatial framework employing GIS technology shall be used to anchor the implementation, monitoring and evaluation of education policy.

The National planning function is centered at the National Treasury which is responsible to deploy Economists and Statisticians to the Central Planning and Project Monitoring Units in Ministries. There is a critical shortage of Economists/Statisticians as the Ministry has not recruited for some time. The Ministry of Education has been gravely affected by this shortage in the Planning Units. The functions of the CPPMU include data Management, Budgeting, Strategic Planning, and Policy Formulation, undertaking Feasibility Studies and Monitoring, Evaluation and Reporting.

With devolution, there will be increased demand in the number of basic education managers and stakeholders involved in the management of education institutions. As a consequence, it shall be necessary to decentralize certain planning functions to the county and school level. Roles and functions of these various actors in the sector shall need to be clarified to ensure that planning, management and accountability in the sector is efficient. This situation will be improved by undertaking a staffing and skills needs analysis at national and county level, and, where necessary, transferring Education Officers to the County level offices.

To address these planning challenges, the Government will implement the following policies:

- (i) Rationalize education and training management systems and structures at national and county levels.
- (ii) Institutionalize research in education and training to inform planning.

To implement and address these policies, the Government will employ the following strategies:

- (i) Develop a comprehensive framework and modalities for decentralizing education and training functions, human and financial resource management as well as decision-making authority to the county and institutional level management bodies;
- (ii) Establish a national mechanism for consultation and co-ordination of various providers of education and training services for the purpose of ensuring harmony in education planning and provision of services at all levels;
- (iii) Strengthen education planning at national, county and institutional levels;
- (iv) Undertake capacity building in data management at the national, county and institutional levels;
- (v) Entrench education planning in the education law;
- (vi) Establish guidelines for the registration of education and training institutions to ensure that construction of learning/training institutions is linked to current budgetary allocation and address the trend of un planned school construction and consequent staffing of un planned schools;
- (vii) Develop and institutionalize an efficient financial management system for education and training; customized for at national, county and institution levels;
- (viii) Establish a cadre of Education Planning Professionals for the education sector;
- (ix) Enhance capacity building programmes in collaboration with relevant institutions;
- (x) Rationalize staffing at the national level.

10.2. Monitoring and Evaluation

The Government faces challenges with regards to conducting effective Monitoring and Evaluation (M&E) Government ministries have not fully embraced M&E, and there is a general lack of appreciation and a positive attitude towards monitoring and evaluation. Monitoring activities have not been harmonized resulting in duplication of efforts, inefficient use of resources, and inadequate appreciation of monitoring and evaluation results. Funding for M&E is also challenge within the government. Institutions are not well sensitized to the importance of providing reliable and credible data.

To address these challenges the Government will adopt the following policy:
Develop and implement a standard M&E system at the national, county and institutional level.

To implement the above policy the Government will employ the following strategies;

- (i) Develop a national Monitoring and Evaluation (M&E) strategy and link it with the National Integrated monitoring and evaluation framework.
- (ii) Develop and implement a score card system on key education and training indicators for monitoring at all levels

- (iii) Establish a sustainable M&E funding mechanism
- (iv) Establish an accurate baseline upon which to measure changes in the quality of education and training
- (v) Build capacity of personnel at national, county and institutional level.
- (vi) Introduce centralized information tracking system and complementary reporting systems to improve data gathering and the dissemination of results.
- (vii) Conduct Education Sector Analysis periodically.

CHAPTER 11: RESOURCE MOBILIZATION

11.1. Public Expenditure to Education

Government expenditure in the education sector has been increasing over the years. Government allocation increased from KES 251.2 billion in 2013/14 to KES 415.2 billion in 2017/18 representing an increase of 65.3 Percent within a period of 5 years. The development expenditure increased from 5.5 Percent of the total education budgetary allocation in 201/14 to 7.2 Percent in 2017/18. This figure is much higher when funding by County Governments which are responsible for ECDE and TVCs are factored in.

Although the total expenditure of education steadily increased over the period, the allocation to education as a proportion of the GDP has remained at an average of 5 Percent over the years. Kenya has been going through a period of infrastructural expansion and as such the general trend in the proportion of GDP spent on education is consistent with the increased spending on roads and expansion of energy sector.

Recurrent education expenditure grew 62.4 Percent. This increase attributed to funding of FPE and FDSE. Recurrent expenditure for university doubled to KES 96.0 billion in 2017/18, recurrent expenditure for teacher service commission rose by 5.7 Percent to 201.9 billion in 2017/2018 while that of Vocational and Technical Training rose by 2.3 Percent to KES 2.5 billion in 2017/18. The total budget for the year 2017/18 was KES 3.070 trillion out of which KES 4012.5 billion (7.4 Percent) was allocated education subsector. This represents an increase from the previous average of 5 Percent in the preceding years. This is attributed to the increased recruitment of teachers; the improvement of terms of engagement for university lecturers; and the increased per student capitation in primary and secondary education subsidy programs. On average, Kenya spends about 25 Percent of its domestic revenue on education recurrent expenditure. These figures show that education is highly prioritized in the country.

Despite the expansion in other sub sectors of education, primary education remains the highest consumer of education budget. as depicted in table 12.1 expenditure in primary education is the highest.

Table 11.1 Education expenditure by levels (current KES millions)

	2010/11	2011/12	2012/13	2013/14	2014/15
Administrative Services	15,943	17,118	13,825	15,573	17,137
ECDE	405	1,687	1,687	1,675	5,073
Primary	71,546	80,184	96,409	104,062	118,590
Secondary	52,780	63,595	73,119	79,230	87,108
TVET	6,836	8,090	9,686	13,133	14,603
University	21,583	34,589	35,873	36,877	42,281
Grand Total	169,093	205,262	230,599	250,551	284,792

Source: The National Treasury, Ministry of Education, Kenya National Bureau of Statistics

More than a third of the total allocation goes to Primary education while about one third of the education expenditure is consumed by secondary education. With the operationalization of devolved governments, ECDE expenditure has increased tremendously but still constitute only 2Percent of the entire education expenditure. This implies that about three quarters of education expenditure in Kenya is directed to basic education (ECDE, primary and secondary education). The large share is attributed to the education subsidy programs as well as salaries for teachers.

Primary education ranges between 40.6Percent and 43.7Percent of the recurrent expenditure. Secondary education receives about 33Percent of the allocation while allocations TVET staggered around 4Percent. Allocation to universities increased from 11.8Percent in 2010 to 16.1Percent in 2011 but has since reduced to 13.7Percent. Due to the takeover of ECDEs by county governments in 2013, allocation to ECDEs has increased a thousand-fold.

Teachers' salaries account for more than 90Percent of salaries in the sector. This amount grew annually at an average of 14Percent between 2010 and 2014. According to expenditure returns from the national teachers' employer, Teachers Service Commission, salaries for primary school teachers accounted for 60Percent of total teachers' salaries in 2014 while 35Percent was spent on secondary teachers and another 5Percent on trainers in TVETs and teacher training colleges.

Table 11.2: Spending on teacher salaries, 2010/11-2014/15 (current KES millions)

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Primary Teachers	58,330	65,995	82,219	90,330	98,379	
Secondary Teachers	33,522	37,927	47,251	51,912	56,538	
Post-Secondary Teachers	4,786	5,415	6,746	7,412	8,072	
Grand Total	96,638	109,337	136,217	149,654	162,989	

Source: The National Treasury, Ministry of Education, Kenya National Bureau of Statistics

Physical infrastructure development especially those funded through decentralized funds such as the Constituency Development Fund (CDF) are not clearly linked to central government spending and recurrent sector spending. This has resulted in the emergence of small and unviable schools in some localities, many without qualified teachers or with limited numbers of teachers.

Research activities have been financed through the National Research Fund, which commenced its activities in 2016/2017 FY with an allocation of KES. 3 billion from the GoK and KES. 384 Million Mobilized from donors. This is expected to be enhanced from the current level of 0.79Percent to 2Percent of GDP as per Science Technology and Innovation Act 2013.

In view of the above, financing and resource mobilization of education and training will be guided by the principles of affordability; needs-based resource allocation including capitation grants; efficiency in resource utilization; partnerships; strong decentralized financing and accountability systems; and effective coordination. Overall, education and training financing sources will include financial outlays by central and county governments, private sector providers of educational services, religious organizations, civil society, foundations, the private sector and Non-Governmental Organizations; households, communities and other stakeholders.

The envisaged expansion of the education and training sector also assumes an increased participation by the private sector in the provision and financing of education particularly at the primary and secondary. The government shall develop and implement a policy framework that promotes private investment across all levels of education. It shall also improve and facilitate private school registration as well as learn from the private sector on how to inculcate the culture and practice of quality assurance and supervision. The aim will be to remove constraints and to facilitate on private participation in education while maintaining quality standards, and to make private education more attractive to private investors.

The government shall uphold the overall policy for quality improvement but will aim to reduce the cost of education and training to households through the provision of teachers, teaching and learning materials and grants to schools to cover operational and maintenance expenses under FPE and FDSE policy. Needs-based capitation grants shall be allocated to learners in ECDE, primary, secondary, special needs education, adult education and not-for-profit non-formal schools that meet set criteria.

The building of new schools/classrooms and the rehabilitation and maintenance of existing facilities will continue to be the responsibility of the (central and county) government, communities and households. Community and household support will be based on agreed guidelines and aimed at reducing the cost burden of education on communities and households.

11.2.Pre-Primary

The Fourth Schedule, on the Distribution of Functions in the Constitution of Kenya (2010), allocates the responsibility of planning and development of Pre-Primary, village polytechnics, home craft centres and childcare facilities to County governments. The National Government shall retain responsibilities for policy, standards and curriculum development, even where implementation is undertaken by county governments. The constitutional requirement making Pre-Primary (4-5 years) part of basic education sub-sector will require increased investment in infrastructure and personnel to cater for increased demand. Currently over 60 percent of the existing public primary schools share some facilities with their respective pre-primary units. Consequently, responsibility for financing

this sub-sector as part of basic education shall be borne by both the Central and County governments.

A challenge facing Pre-Primary service provision is that most teachers are untrained and where teachers have been trained, they are employed on very low salaries. In the Sessional Paper No. 1 of 2005, the government was to have integrated Pre-Primary into basic education, but this policy was not fully implemented, and most Pre-Primary development has come from private initiatives. Pre-Primary structures are mostly semi-permanent, local or church halls or any other building which the local communities accept as suitable. However, few premises have been inspected and the consensus view is that many Pre-Primary premises fail to meet minimum education standards. The sector generally lacks adequate learning and teaching materials, especially books for use at the early age, while no standard curriculum is followed. There is no evidence that operators of Pre-Primary centres consider the needs of children with disabilities.

To address these challenges, the Government will through the respective County governments, adopt the following policies:

- (i) Mainstream Pre-Primary into basic education and ensure automatic transition from Pre-Primary to primary education Encourage communities to continue provision of teaching and learning materials;
- (ii) Promote increased private sector financing of Pre-Primary services;
- (iii) Promote girls' education through provision of sanitary towels.

To implement the above policies, Government will employ the following strategies:

- (i) Review specific standards for school inputs including teachers; teaching and learning materials and capacity building;
- (ii) Continue to provide resources for infrastructure;
- (iii) Review Pre-Primary policy, standards and regulations with a view to arriving at clear instruments and articles governing the Pre-Primary sub-sector;
- (iv) Strengthen partnership for the development of Pre-Primary services through a number of incentives to private investors;
- (v) Identify and allocate capitation grants for children with special needs and plan for special Pre-Primary Centres that would offer services to such children;
- (vi) Promote nutritional and health programmes at Pre-Primary Centres in collaboration with the line Ministries of Health, agriculture and other stakeholders;
- (vii) Mobilize funding for the introduction of appropriate ICT skills, which support play and psycho-motor development across all Pre-Primary centres.

11.3. Primary

At the primary level, the government shall continue to cover the cost of teacher's personal emoluments, non-salary costs, teaching and learning materials and other operating costs; but shall hold officers and teachers accountable for this investment. Parents will meet other indirect costs, including uniforms.

However, the sub-sector faces challenges including; resource mismanagement, poor infrastructure, mis-procurement, failures in monitoring, maintenance and equipping schools; all of which will require considerable financial investment to remedy. Equally challenging is the need to improve the efficiency of the sub-sector, not least to ensure the application of efficient staffing norms, improved value added from teachers, cutting the levels of teacher absenteeism and improving the quality of teaching and learning outcomes. The continued existence of child labour and the failure of schools to report such practices to relevant authorities further constrain access and completion while making schools less cost-effective.

To address these challenges, the Government will adopt the following policies:

- (i) Continue to provide teaching and learning resources for free and compulsory primary education for all children;
- (ii) Continue to provide resources for infrastructure
- (iii) Establish a cost-effective system of sustainable financing of primary education.
- (iv) Encourage and mobilize Non State Actors (NSA) to invest in education services.
- (v) Invest in more ICT as instructional resource as well as a management tool.
- (vi) Continue to fund school meals, health and nutrition programme
- (vii) Support low-cost boarding schools in ASALs
- (viii) Review unit cost after every 5 years in line with MTEF

To implement the above policies, the Government will employ the following strategies:

- (i) Finance primary education through the provision of teachers; teaching and learning materials, operational costs and capacity building of teachers;
- (ii) Develop a Financial Management System for schools to capture both budgetary and off budget resources in schools;
- (iii) Ensure budgetary allocations to schools are on the basis of identified individual school needs and unit cost;
- (iv) Review unit cost after every 5 years to take into account emerging issues in the sector and inflationary tendencies;
- (v) Review the current norms on ideal school size and to increase it to at least 160 pupils, with at least 25 pupils per class or 160 pupils per school within the first year of establishment.
- (vi) Provide education services based on learning needs and the unit cost of providing such services at this level;

- (vii) Ensure that the development and maintenance of infrastructure is well coordinated and linked to the recurrent budgetary provisions; both by central government, county government and decentralized funds;
- (viii) Implement enrolment-based staffing norms; with high potential schools receiving teachers on basis of 1:45 pupils and 1:25 pupils for low potential areas;
- (ix) Use school mapping and demographic data in planning and provision of education, including and establishing new schools;
- (x) Offer structured training to all head teachers and members of school management committees/boards in accountancy and procurement management, backed by well-trained support staff;
- (xi) Ensure full enforcement of teacher absenteeism disciplinary measures as in the Code of Regulations in order to improve efficiency in teacher resource utilization in schools
- (xii) Integrate sanitary towels costs into FPE capitation grants to schools for girls who require them;
- (xiii) Review financing of Primary Education to ensure that FPE becomes sustainable;
- (xiv) Mobilize funding for the introduction of ICT across all primary schools;
- (xv) Float Bonds for financing primary education; and
- (xvi) Develop an incentive plan for Non State Actors to invest in education.

11.4. Special Education

Financing of special education and training still remains a challenge to the Government. The Government spends 0.2 percent of the total education budget on special education, which is inadequate. Consequently, most of the financing comes from civil society, particularly local and international NGOs. In view of the Constitution of Kenya (2010), its commitment to international protocols on the rights of children and its commitment to the EFA goals, a framework incorporating the financing requirements of special education will be established.

There is a shortage of specialized teachers/trainers and other support staff; children and youth with severe special needs continue to be excluded from school due to the inability of regular schools to meet their physical and educational needs. Identification of children with special needs remains problematic, while the Education Assessment Resource Centres (EARCs) have inadequate specialized equipment and human resource to discharge their services effectively. Additional costs associated with children with disabilities, such as medical treatment, special diets and assistive devices raise the unit cost of special education. Inappropriate infrastructure, inadequate facilities and lack of equipment compound the difficulties being faced in this area.

To address these challenges, the Government will implement the following policies:

- (i) Provide instructional materials and equipment and offer incentives for local production of such materials and equipment.
- (ii) Provide infrastructure and facilities.

- (iii) Rehabilitate and strengthen education assessment resources centres (EARCs) as well as assessment programme.

To address the policies, the government will implement the following strategies:

- (i) Enhance and continue disbursing capitation grants to special schools and units; procure specialized instructional materials and equipment in addition to the capitation.
- (ii) Provide incentives for local production of specialized equipment and instructional materials.
- (iii) Disburse operational grants to EARCs to enable the staff carry out community mobilization and other outreach activities.
- (iv) Enhance the capacities of the Kenya Institute of Special Education (KISE) and universities which offer training programmes for special needs education teachers across all levels.
- (v) Adequately fund and resource these institutions.
- (vi) Improve SNE data management system and integrate it into the EMIS at National and County levels;
- (vii) Provide specialized instructional materials, equipment, assistive devices and appropriate ICT software and hardware to institutions with learners with special needs;
- (viii) Improve the physical and social environments in learning institutions;
- (ix) Develop and fund programmes to create public awareness and advocacy on SNE mainstreaming into the education programmes across all levels.
- (x) Provide sanitary towels for girls

11.5. Secondary Education

Secondary School Education is currently financed through capitation grants from Government under the Free Day Secondary Education programme and boarding user fees by households. The private sector, Faith Based Organizations (FBOs), NGOs and Community Based Organizations (CBOs) invest in secondary schools and complement school construction by the Government. Due to the high cost of funding public secondary education in Kenya, which accounts for 23Percent of the total education budget, sustainable financing investment strategies, including for the delivery of technical subjects, will need to be pursued to allow the sub-sector to expand to meet demand.

To address these challenges, the government will implement the following policies:

- (i) Enhance resources for free day and compulsory education
- (ii) Continue to provide resources for infrastructure
- (iii) Establish a cost-effective system of sustainable financing
- (iv) Encourage and mobilize Non-State Actors to invest in education services
- (v) Invest in ICT as an instructional and a management tool
- (vi) Provide resources for equipment, teaching and learning materials as well as infrastructure for 100 Percent transition from primary to secondary

- (vii) Review the unit cost every 3 years

To address the above policies, the government will implement the following strategies:

- (i) Develop and institutionalize the use of a linked in school-County Headquarters Financial Management Information System to capture both budgetary and off budget financing (including user fee charges) to the sector while empowering parents and community members to make better choices and participate more effectively in school financial management.
- (ii) Improve access to secondary education through reduction of unit costs at secondary education and the introduction of automatic progression and transition through the various grades and levels.
- (iii) Review the current norms on ideal secondary school size to at least 150 pupils; and at least 25 pupils per class or 150 pupils per school within the first year of establishment.
- (iv) Adopt cost effective resource allocation standards including class sizes of 45 students; PTR of 35:1; and for each school to have at least 3 streams per class for effective resource utilization.
- (v) Increase capitation grants for secondary school students in line with inflation.
- (vi) Target day schools for the expansion of secondary education.
- (vii) Provide sanitary towels for girls
- (viii) Provide bursaries for poor and vulnerable children in public secondary schools through Country Education Boards.
- (ix) Improve the management, monitoring, targeting and effectiveness of decentralized bursary funds.
- (x) Expand secondary school entry to at least three streams per school to ensure better utilization of teachers.
- (xi) Strengthen school inspection and quality assurance services to ensure compliance with contracts and quality norms.
- (xii) Reform teacher training policy to ensure teachers are trained to teach at least two specialist subjects.
- (xiii) Explore other cost-effective modes of secondary education delivery including distance learning and use of ICT.
- (xiv) Improve the special assistance scheme and affirmative action policies for the needy students.
- (xv) Ensure effective co-ordination and implementation of all projects in the sector.
- (xvi) In Arid and Semi-Arid Lands (ASAL) expand provision of boarding and mobile schools, which shall be subsidized by the government.
- (xvii) Raise Bonds for financing secondary education.

11.6. Adult and Continuing Education

Adult and continuing education is currently financed through government revenue under recurrent and development funds. Adult and continuing education is a shared responsibility, by the private sector, faith-based organizations, NGOs, and community based organizations which complements government efforts in financing ACE programmes. Many ACE centres

are run by ACE non-state investor. The sub-sector has been receiving less than 1Percent of the total national education budget contrary to the international recommendation of 6Percent as per the Belem Framework. The international benchmarks by UNESCO propose that 3Percent of the total education budget be allocated to ACE programmes. This under funding and inefficiency has inevitably yielded poor results in implementation, monitoring and evaluation. Therefore, there is need to put in place sustainable financial investment strategies to enhance participation, expand access and improve quality of ACE programmes. The programme is also faced with challenges of understaffing, poor infrastructure and capacity building.

To address these challenges, the government will adopt the following policies:

- (i) Allocate at least 3Percent of the education budget to adult education programmes.
- (ii) Increase enrolment of adult learners by 50Percent by 2030.

To implement and address these policies, the government will employ the following strategies:

- (i) Enhance funding of the ACE at basic education level
- (ii) Refurbish and complete the stalled projects in the Multi-Purpose Development Training Institutes (MDTIs).
- (iii) Establish continuing education classes at secondary level.
- (iv) Institutionalize adult teacher education.
- (v) Provide teaching/ learning/ materials for adult learners
- (vi) Establish infrastructure in all ACE centres.

11.7. Financing of Technical and Vocational Education and Training

Although the combined expenditure on the education and training sectors has been on the increase, only 1Percent of the total budget of the Education Sector for the year 2016/17 was allocated to TVET and close to 49Percent of the allocation to TVET goes to recurrent expenditure. This low budgetary allocation has continued to be a major constraint in the TVET sector and yet the sector is the key vehicle for rapid industrialization as outlined in Vision 2030.

Other than Government budgetary allocation, there has been inadequate technical assistance or donor support from development partners towards technical education at all levels. It is essential to examine other sources other than government budget allocations, for mobilizing resources and generating revenue. The challenge remains in empowering institutions to engage in lawful income generating activities without losing focus on their core mandate.

A partial solution for the challenge of TVET financing is to introduce activities that center on linking the services of TVET institutions to the needs of private sector enterprises. In this way TVET institutions will be encouraged to partner with the private sector to establish enterprises. Further, TVET institutions with infrastructure comprising good workshops and laboratories

provide a good platform for this partnership. Additionally, such enterprises will provide a practice-based curriculum and physical facilities for product realization and an improved educational experience that emphasizes on the interdependency of learning, design and production in a quasi-business environment.

The envisaged expansion of TVET sector also assumes an increased participation by the private sector in the provision and financing of training. In order to attract financing in TVET, the government needs to embrace Public Private Partnership (PPP). Other efforts such as tax holidays and tax rebates need to be made in order to attract and facilitate private sector participation in TVET. In order to make investment in TVET more attractive to the private sector, the government needs to address the issue of obsolete training equipment and improve training infrastructure.

To address these challenges the Government will adopt the following policies:

- i Develop creative and innovative ways of mobilizing resources and generating revenue for TVET;
- ii Establish secure and sustainable funding mechanisms for development of TVET infrastructure and improving equipment.
- iii Establish a strong Public Private Partnership engagement.

To implement these policies the Government will employ the following strategies;

- i Strengthen partnerships with industry for improved access, enhanced quality delivery of programmes, improved examination and assessment;
- ii Create and promote an enabling environment for public-private partnerships to enhance investment and financing of programmes and development initiatives in TVET;
- iii Enhance funding targeting missing links in the knowledge application value chain;
- iv Provide operational autonomy to TVET institutions;
- v Enhance a culture of accountability, democracy and transparency in the governance and management of the institutions;
- vi Ensure participation in and consultation with all stakeholders at regional and national levels;
- vii Enhance loans, bursaries and scholarships to students in TVET institutions under coordination and management of TVET funding board; and
- viii Determine Differentiated Unit Cost (DUC) for grants to TVET institutions.
- ix Strengthen and streamline income generating activities in TVET institutions.

There is need for TVET to develop and implement a Differentiated Unit Cost (DUC). This is defined as the annual cost of providing a particular TVET program per student, taking into account the staff costs, facility costs and other institutional overhead costs.

11.8. Financing of University Education

University education is expensive and requires huge investments by all partners. The average spending per student at the university level was 31 times, 6 times, and twice as expensive in relation to primary, secondary and TVET education, respectively. It indicates that university education through public universities is particularly expensive to Government and is not sustainable with current resources. Public universities will, therefore, have to reduce their dependence on the Government by diversifying their sources of income as well as ensuring more efficient and cost-effective use of institutional resources. They will also be required to establish comprehensive financial management systems that ensure efficiency in the application of resources. The Government will also increase the incentives to encourage the growth of private universities in the Country.

Both private and public universities derive the bulk of their funding from tuition and fees paid by students directly or paid on their behalf by Government or other sponsor. Primary sources of tuition include scholarships, loans and bursaries from Government, as well as household income. Public universities, as state-owned and funded corporations, have an obligation to the taxpayer to provide quality and affordable university education. The tuition and fees for Kenya citizens at public universities, therefore, will be expected to be lower than those of private universities. Universities must participate more actively in consultancies, especially those from Government, both as income generation activities, as well as for national development.

The introduction of DUC in public universities has eliminated the distinction between the Government-sponsored and self-sponsored students in public universities. As a result, public universities will need to develop appropriate staff compensation mechanisms and encourage continued optimum use of university facilities through the provision of services to students in the evenings and on weekends, with a view to increasing access.

The challenges in financing public universities include: inadequate budgetary support; inadequate funds for capital development; lack of programme differentiated unit cost in provision of funds from Government; inadequate internal income generation by the universities; and system inefficiencies.

The challenges in financing private universities include: lack of incentives from Government; students enrolled in private universities do not benefit from Government sponsorship; and weak financial base for upcoming institutions.

To address these challenges the Government will adopt the following policies:

- (i) Establish lean and efficient management systems and efficient utilization of resources allocated to universities.
- (ii) Provide budgetary support to public universities in direct proportion to the total number of Full-Time Student Equivalent (FTSE) in each institution;

- (iii) Determine the amount of budgetary support per programme based on the strategic importance of the programme to national development goals and the programmes Differentiated Unit Cost;
- (iv) Extend Government sponsorship to students in private universities;
- (v) Diversify sources of funding university education through participation of businesses, industry and donations or endowments from individuals or philanthropic foundations;
- (vi) Encourage higher education institutions to be more „entrepreneurial“ in providing their services and seeking contracts for research and consultancy;
- (vii) Encourage university faculty to incorporate students in consultancies, giving the students exposure and experience that will prove invaluable after graduation and;
- (viii) Seek consulting teams for major projects through competition among universities and government institutions as a first step, before considering other avenues of undertaking the same.

To implement these policies the Government will implement the following strategies:

- (i) Provide public universities with budgetary support to meet part of their recurrent costs;
- (ii) Make university education at public institutions more affordable to Kenyans by among others through increased budgetary support to defray part of the student tuition and fees costs;
- (iii) Provide low-cost loans to public institutions for capital development;
- (iv) Provide conditional low-cost capital development loans to private institutions who agree to abide by the accountability and equity mandates placed on public institutions;
- (v) Encourage public-private-partnerships in funding university education including but not limited to development of endowments for scholarships, development and shares, providing naming rights to major sponsors of buildings and other facilities, grants for research and development;
- (vi) Encourage universities to engage in other Income Generating Activities (IGAs) to boost their revenue base, so long as participation in those activities does not pull resources or detract the universities from their core business.

CHAPTER 12: PUBLIC-PRIVATE PARTNERSHIPS IN EDUCATION AND TRAINING

Kenya currently invests 6.4 Percent of GDP annually on education. This heavy investment is borne largely by Government alone. One important policy option is partnership between the Government and non-public providers of education and training that can help reduce levels of public financing. Public-Private Partnership (PPP) has been adopted globally to enable governments obtain greater value for their investment in education.

Government recognizes that without a working partnership on financing education, it will be hard to address the problems of access, equity, quality and the current heavy household financial burden in education. The PPP can take various forms from direct investment by the private sector either for the establishment of an institution or in support of one or more. It can also involve government and private institutions partnering to provide investment for specific educational purposes, such as support for ICT.

The Government will seek to establish a conducive environment to facilitate partnerships between Government, households and local communities, industry and commerce, private sector providers of educational services, NGOs, civil societies and foundations. This will entail removing the constraints on private sector participation in education and training, especially in the areas of education financing and land acquisition, by giving incentives designed to make private education more attractive to investors and by creating a facilitative regulatory environment. This may include tax incentives, VAT and Stamp Duty relief and the provision of low interest “start-up” loans.

Coordination of the stakeholders is not only important for effective management of the sector, but also for accountability and transparency in the sector. This will address the following challenges;

- i Some of the stakeholders work directly with school without the approval by the Ministry leading to duplication, unauthorized content, conflict with other stakeholders
- ii Lack of accountability of investments made in the sector which could lead to malpractices
- iii Uncoordinated activities which lead to resource wastage

To facilitate more involvement and participation of the private sector, the government will progressively adopt and operationalize a public-private partnership (PPP) framework for the Education and training sector.

To operationalize the PPP framework, the government will adopt the following strategies:

- (i) Prioritize the creation of a revolving capital fund for lending to educational entrepreneurs at a marginal interest rate, and other innovative funding initiatives including the introduction of an education bond and research fund.

- (ii) Float sovereign bonds to support the funding of the sector.
- (iii) Encourage philanthropy participation in the sector.
- (iv) Set up a sustainable scholarship model for the sector.
- (v) Build capacity of education and training ministry, departments, agencies and commissions, on PPP.

To address these challenges the government will implement the following policy: Adopt and operationalize a public-private partnership (PPP) framework for the Education Sector in Kenya.

To address the above policy, the Government will adopt the following strategies:

- (i) Identify all stakeholders
- (ii) Prioritize the creation of a revolving capital fund for lending to Educational entrepreneurs at a marginal interest rate, and other innovative funding initiatives including the introduction of an Education Bond.
- (iii) Float sovereign Bonds to support the funding of the sector.
- (iv) Build capacity of education staff on PPP.
- (v) Establish both National and County Education Sector Coordinating Team.
- (vi) Establish communication and reporting strategy
- (vii) Establish a National Education Week.

CHAPTER 13: LEGAL FRAMEWORK

Education and Training as a sector is backed by an elaborate legal and institutional framework. The constitution defines education as a social Economic right, public good and a fundamental imperative for development as a country. To implement this provision various legal instruments have been enacted by relevant arms of government as follows:

The Constitution, Acts of parliament, regulations made under the acts of parliament, circulars, guidelines, administrative procedures, and international legal instruments.

These sources of law on education and training originate from the ministry and its agencies as well as other organs of government which handle matters related to education and training.

13.1. The Constitution

The Constitution of Kenya (2010) provides for a number of education related provisions embodied in the Bill of Rights. More particularly, the constitution makes the following key provisions as regards education: It guarantees the Right to Education for everyone under Article 43; every child has a right to Free and Compulsory Basic Education under Article 53 (b). Children are to be protected from abuse, inhumane treatment and violence under Article 53(1) (d). Youth are entitled to government measures which include affirmative action to ensure that they have access to relevant education and training, and protection from harmful cultural practices and exploitation under Article 55.

Every matter involving the child must be taken into consideration for the best interest of the child as dictated by Article 53(2). Persons with disability have a right of access to appropriate education institutions and facilities under Article 54. The constitution also provides that minority and marginalized groups are to be provided with special opportunities in the educational and economic fields (Article 56(b)).

The Fourth Schedule (Parts 1 & 2) on the distribution of functions between the National and County governments gives the National Government the mandate over education policy, standards, curricula, examinations, university education and the granting of university charters, tertiary education and institutions and other institutions of research and higher learning. It also has the mandate for primary education, special education, secondary education and the promotion of sports and sports education. The County governments have mandate over pre-primary education, village polytechnics, home-craft centres and childcare facilities.

13.2. International Conventions

By virtue of Article 2 (5), (6) of the Constitution, treaties or conventions ratified by Kenya form part of the law of Kenya. Accordingly, a number of conventions relating to education which Kenya has ratified, form part of the education legal framework of the country.

Kenya has ratified three key regional conventions which make provision for education. These are; the African Charter on the Human and Peoples' Rights under Article 17, which provides that every individual shall have a right to education; and the African Charter on the Rights and Welfare of the Child, Article 11, which provides detailed provisions on the right to free and compulsory basic education for the child and, state's obligation towards that right. Further in East African region Kenya is the founder having ratified the East African Community charter as entered into, various protocols, agreements and regional administrative arrangements on matters of education and training.

Some of the UN Conventions, Kenya has ratified include; the International Convention on Social and Economic Rights, Article 13, which declares the recognition of the right of all to education and the objectives thereof, and the Convention on the Rights of the Child, Articles 28, 29 and 30, which secure the rights of a child to free and compulsory basic education.

13.3 Legislation Review

The provisions on education under the constitution and international conventions cannot by themselves adequately facilitate the provision of education and training in the country. Further legislations were passed between the years 2010-2014 and their implementation has varied experiences and lessons for review and improvement of these legislations. This sector wide review of the legal framework will help the country realize the national goals in education and training as well as contribute to national development agenda. .

There is need for concept legislation on education that casts the overall education and training objects and purposes as set out in this sessional paper. That legislation will also lay the basis for an optimal, efficient and professional approach to creation, development and utilization of resources in the sector. It will also create mechanisms for efficient cooperation of the ministry and its agencies as well as other stakeholders in education and training.

To address existing legal challenges, the government will review the existing education and training legislations as need arises.

To implement this policy, the government will adopt the following strategies;

- (ii) Develop a responsive education strategic and implementation planning and financing framework.
- (iii) Identify and indicate the roles of different actors in the provision of education and training services at all levels particularly, the Government, parents/community, sponsors, civil society, development partners and the private sector.

- (iv) Decentralize operational functions and vest authority and decision-making in management bodies at all levels of service delivery in the education and training sector.

CHAPTER 14: KENYA NATIONAL QUALIFICATIONS FRAMEWORK

Harmonization of educational qualification system with best practice in other systems in the World is vital, especially on the need to provide an integrated system that considers life-long learning including assessment and certification of prior learning. Many countries have developed academic qualifications framework because of its inherent cost-effectiveness. Globally countries that have vibrant workforce deliberately invest heavily and develop systems in national qualifications framework in order to drive their science, technology and innovation agenda, to which TVET is directly linked.

The Kenya Vision 2030 avers that education provided in Kenya shall be accessible, relevant and globally competitive. Harmonizing of the qualifications with best practice in other systems in the World is vital, especially on the need to provide an integrated system that considers life-long learning including assessment and certification of prior learning. National Qualifications Framework" means the national system for the articulation, classification, registration, quality assurance, and the monitoring and evaluation of national qualifications as developed in accordance with the related Act.

To realize this, the government enacted the Kenya National Qualification Framework Act No.22 of 2014 to establish the Kenya National Qualifications Authority; to provide for the development of a Kenya Qualifications Framework and for connected purposes.

There has been a multiplicity of competent bodies in Kenya dealing with qualifications obtained from public sector institutions at different levels. These include some government departments and agencies such as DIT, CUE, KNEC, University Senates, Councils and Boards of Management of authorized institutions. The training in the private sector is also managed under multiple industry administrations.

There is need to provide clear policy guidance on the requirements for registration of national qualifications; specification of qualifications; criteria for the assessment, award and issuance of qualifications. There is also a need for policy guideline on framing and structuring outcome descriptors for academic and TVET qualification types and levels.

The elements of the KQF will include but not limited to: descriptors for competences to be assessed, evaluated and awarded at all the education and training pathways, for levels and sublevels, as and where necessary.

The requirements for course entry and final recognition of qualifications are not uniform as every industry sector has evolved its own occupational standards with some sectors keeping their standards within private mechanisms in the interest of security or as a business secret. Uniform requirements have often been set for entry to education and training programmes alike. This policy acknowledges that there are different kinds of TVET programs each uniquely targeting a certain category of trainees whose entry requirement differs. As a rule, the requirement for entry to a programme leading to a job skill qualification shall be the immediate lower level TVET qualification, while for entry to an educational programme

leading to an academic qualification shall be the immediate lower academic qualification. The problem of entry-grade variance and mixing up TVET with academic entry requirements is encountered within industrial training where providers work with performance/occupation standards and benchmarks that are at variance. Thus, employers need a reliable tool which they can apply to determine the relative rating of competencies acquired under the various programmes.

Although at the institutional level KNEC examinations are uniform throughout Kenya irrespective of region and regardless of the rural-urban digital divide, various private institutions and professional bodies offer international or their own qualifications following uncoordinated standards. No comprehensive register of these qualifications, criteria for their award or the skills and competencies required exists either. On the other hand, TVET is provided across formal, non-formal and informal settings including school, industry and Jua Kali environments, with few uniform curriculum standards enforced across them. This entrench subjectivity and as a result there is little means of guaranteeing the integrity of some of the qualifications. It also makes it difficult to assess whether the foreign qualifications meet national norms and standards and vice versa.

Various countries have developed their respective National Qualifications Frameworks to address issues of comparability of qualifications to facilitate cross border mobility of workers and students. NQFs also tend to enhance the quality and integrity of academic and professional qualifications while increasing international comparability. For example, the Bologna Process is harmonizing academic qualifications in Europe to the benefit of students and academic staff across the Higher Education Systems in the European Union. A good start has already been made in Kenya to assess foreign qualifications, especially in the case of foreign teachers immigrating to serve in the country. Also, Partner States have agreed and committed to harmonize the national qualifications within the East African Community. The exercise on Harmonization of the East African Education Systems and Training Curricula is on-going.

In addressing the above challenges, the government will adopt the following policies:

- (i) Establish standards for recognizing qualifications obtained in and outside Kenya
- (ii) Develop a system of competence, life-long learning and attainment of national qualifications;
- (iii) Align the qualifications obtained in Kenya with the global benchmarks in order to promote national and trans-national mobility of workers;
- (iv) Strengthen the Kenya National Qualification Authority (KNQA) to perform its mandate. and
- (v) Facilitate mobility and progression within education, training and career paths

To implement this policy the Government will employ the following strategies;

- (i) Strengthen KNQA to enable it to fulfil its mandate
- (ii) Develop, implement and keep under continuous review an Exemption and Credits Transfer System (ECTS).

- (iii) Maintain national data base of the existing academic and professional qualifications in Kenya
- (iv) Document descriptors outlining the core abilities and capabilities of the outcomes of primary, secondary, tertiary, TVET and university education levels.
- (v) Coordinate and regulate all qualifications for ease of understanding by the stakeholders.
- (vi) Continuously assess learning outcomes and recognition of prior learning and skills