



KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

**REPORT ON NEEDS ASSESSMENT FOR PRIMARY LEVEL
SCHOOL CURRICULUM IN KENYA**

KENYA INSTITUTE OF CURRICULUM DEVELOPMENT
P.O BOX 30231- 00100
NAIROBI
TEL: 3749900-9
Email info@kicd.ac.ke
www.kicd.ac.ke

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FOREWORD

Kenya effected the last curriculum reform in 1985, when there was a shift from the 7-4-2-3 System to the 8-4-4 system. The purpose of this move was to provide a curriculum that would help learners to gain practical skills and competences to enable them become self-reliant. The curriculum was reformed from one that geared the learners towards white collar jobs, to a more practical oriented curriculum that would enable graduates of the system to generate jobs. An evaluation of the curriculum in 1995 revealed that the curriculum had a heavy workload across the various subjects in primary and secondary education. Based on the Report on “Total Integration of Quality Education and training” of 1999, a needs assessment was undertaken. The national curriculum for primary, secondary education was then reviewed in 2002, followed by Teacher Education Curriculum in 2004.

Over the years, education in Kenya has been guided by the prevailing national goals identified through the establishment of various Education Commissions and situational analyses of the educational needs of the country. Currently, the sector seeks to align education to the Constitution of Kenya, 2010 and the Kenya Vision 2030 guided by national education policies and international agreements. These include the Sessional paper No 2 of 2015, National Education Sector Plan (NESP), Education for All (EFA), the Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs). This needs assessment was carried out in order to ascertain the fundamental expectations of Kenyans as the basis for designing relevant and quality curricula for the levels of basic and tertiary education in tandem with the aspirations of the nation.

Specifically this needs assessment study provides the basis on which the Ministry of Education Science and Technology and policy-makers will make critical decisions to set the various learning areas as well as the relevant pathways. This will drive the education sector reforms that should lead the country to achieving the tenets of the Constitution of Kenya and the Kenya Vision 2030.

PROF. ERASTUS P. KINYANJUI
CHAIRMAN
KICD COUNCIL

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DR. JULIUS O. JWAN
DIRECTOR/CEO
KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

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ABBREVIATIONS AND ACRONYMS

| | | |
|-------|---|---|
| ABE | - | Adult Basic Education |
| AIDs | - | Acquired immune deficiency syndrome |
| CBE | - | Competence Based Education |
| EAC | - | East African Community |
| ECD | - | Early Childhood Development |
| ECDE | - | Early Childhood Development and Education Centers |
| EARC | - | Education Assessment Resource Centre |
| EFA | - | Education for All |
| ESD | - | Education for Sustainable Development |
| ESQAC | - | Education Standards Quality Assurance |
| GOK | - | Government of Kenya |
| HIV | - | Human immunodeficiency virus |
| IBE | - | International Bureau of Education |
| ICT | - | Information Communications Technology |
| KCPE | - | Kenya Certificate of Primary Education |
| KICD | - | Kenya Institute of Curriculum Development |
| KIE | - | Kenya Institute of Education |
| KNEC | - | Kenya National Examination Council |
| MDGs | - | Millennium Development Goals |
| MoEST | - | Ministry of Education Science and Technology |
| NESP | - | National Education Sector Plan |
| NFE | - | Non Formal Education Centers |
| REAR | - | Research Academic Reform |

| | | |
|--------|---|--|
| SACMEQ | - | Southern and Eastern Africa Consortium for Monitoring Educational Quality |
| SDGs | - | Sustainable Development Goals |
| SNE | - | Special Needs Education |
| SPSS | - | Statistical Package for Social Sciences |
| STI | - | Science, Technology, and Innovation |
| TIMSS | - | Trends in International Mathematics and Science Survey |
| TSC | - | Teachers Service Commission |
| UPE | - | Universal Primary Education |
| TTC's | - | Teachers Training Colleges |
| UNESCO | - | United Nations Education Scientific Cultural Organization |

EXECUTIVE SUMMARY

The Needs Assessment Study was carried out to provide an objective basis for making reforms for the competency-based primary school curriculum. The objectives that were generated to guide the study were to: establish the general needs of primary school education, competencies, talents and content for the primary level of the curriculum. The study also sought to identify resources and desired pedagogical approaches suitable for competency based curriculum at the primary level. In addition, assessment modes for competency based curriculum at the primary level were sought.

The descriptive survey design that relied on quantitative and qualitative data collection techniques was used. Quantitative methods were applied to examine variables and their relationships. Qualitative methods were also used to explore perspectives and attitudes among respondents. Data was collected from learners, teachers and head teachers in primary schools. Additionally, parents, education officers, members of the informal sector, industrialists and a range of key informants outside the school setting provided data for the needs assessment. Others gave their views through a memoranda. Questionnaires, focus group discussions, interview and observation schedules were the instruments that were used to collect data from the respondents. Memoranda were also submitted to provide research data.

The research findings revealed that there are inter-relationships between the various dimensions of the needs in society like security and economic growth. The findings further showed that curriculum in its current state does not offer enriched content and processes, that are engaging to create and transform the learner into a person with competencies that are in tandem with the ever changing national and global contexts. It was also indicated that the curriculum does not have a framework for identifying and nurturing talents. Inadequate infra-structure, instructional materials and teaching staff in learning institutions have hindered effective delivery of curriculum. Though quality teacher education and sufficient resources are key in supporting suitable pedagogical approaches, teachers are not well grounded in learning approaches that encourage participation of learners as they acquire desired competencies. Further, teaching environments and teachers do not offer opportunities for a wide array of assessment that foster

cognitive and non –cognitive competencies. In regard to emerging issues, the findings pointed out that their complexity and magnitude of their impact cannot be handled without organized learning experiences in both formal and non-formal settings.

Improvements need to be made in terms of a curriculum that contextualizes the realities of needs in society so that the learners can relate what they are taught to their own experiences. It is recommended that the curriculum conceptualization and implementation should embody a learning environment that is well equipped and activity oriented to create supportive situations for the development of competencies for real-life or work related situations. Options for learning areas should make provisions that are authentic for the individual learners in their society, without necessarily marginalizing the nation from its development priorities and the pre-dominant global trends that are shaping education.

The study recommends a more integral view of education that seeks synergies between inputs, processes and outcomes for the provision of a variety of teaching and learning resources in different formats, including use of modern technology. An alternative to the present distribution of the capitation grant according to the number of children enrolled is also suggested. This will allow for additional support in the form of higher spending per pupil, especially where standards of education are low. In order to alleviate the pedagogical problems linked to quality and variety of teaching methods, teacher re-orientation and re-training is recommended.

Given the key roles of both teachers and parents, they should be equipped to utilize appropriate strategies and infrastructure for identifying and nurturing talents in the reformed curriculum. Since competencies cannot be effectively assessed by multiple choice or paper-and-pencil tests, alternative procedures are needed for both summative and formative assessment to support the new directions of learning. Finally, models for teaching pertinent and emerging issues in schools should embrace whole school approaches that use practical demonstration to reinforce learning.

CHAPTER ONE

BACKGROUND TO THE STUDY

1.1 Introduction

Global and national education authorities are seeking innovative curriculum solutions to improve the quality and relevance of student learning. Through the use of different approaches, education is expected to enable students to apply their learning to the challenges and opportunities they encounter throughout their lives. While knowledge and education are considered among the major factors contributing to the reduction of poverty, sustainable development and economic growth - it is the curriculum that is increasingly viewed as the foundation of educational reforms that are aimed at achieving high quality learning outcomes. Thus, the curriculum represents a conscious and systematic selection of knowledge, skills and values which shape the way teaching and learning processes are organized, by addressing questions related to what students should learn, why, when and how (UNESCO, 2012).

The curriculum is also understood as a political and social agreement that reflects a society's common vision while taking into account local needs, national expectations and global trends. In the last two decades, curriculum reforms have been driven by rapid technological and social changes; the need to address the new challenges of contemporary life; the emergence of a knowledge society that depends on lifelong learning; the growing emphasis on assessment of performance; and the prominence of issues related to equity, quality and inclusion among other factors. In this regard, contemporary curriculum reform and development processes increasingly involve public discussion and consultation with a wide range of stakeholders.

Over the years, education in Kenya has been guided by the prevailing national goals identified through the establishment of various Education Commissions and situational analyses of the educational needs of the country. Currently, the sector seeks to align education to the Constitution of Kenya and the Kenya Vision 2030 guided by national education policies and international agreements. These include the Sessional paper No 2 of 2015, National Education Sector Plan (NESP), Education for All (EFA), the Millennium Development Goals (MDGs) and Sustainable Development Goals. This needs assessment was carried out in order to ascertain the

fundamental expectations of Kenyans as the basis for designing relevant and quality curricula for the levels of basic and tertiary education in tandem with the aspirations of the nation.

1.2 Context of the study

KICD is the national curriculum development centre established through the KICD Act No. 4 of 2013 of the laws of Kenya. The Institute's core function is to initiate and conduct research to inform curriculum policies, review and development. The Institute is charged with the development, evaluation and approval of curricular and curriculum support materials for all levels of education except for the university level. The Institute also organizes and conducts professional development programmes for teachers, teacher trainers, quality assurance and standards officers and other officers involved in education and training on curriculum programmes and materials.

Curriculum plays an important role in how learners are taught, and there is a strong body of evidence that shows that putting a high-quality curriculum in the hands of teachers can have significant positive impacts on student achievement. International standards set by International Bureau of Education (IBE) recommend that curricula should be reviewed every five years, thus recognizing the dynamism of development of society. The Kenyan curricula for primary and secondary were last reviewed in 2002.

During the World Education Forum of Dakar 2000, in Senegal, 164 governments pledged to achieve the six goals that had been set for Education for All (EFA) and Millennium Development Goals (MDGS) by 2015. This resolution propelled provision of access to education in many countries with high levels of enrolment being registered at both primary and secondary levels UNESCO- IBE (2015) . The number of youth exiting school into the world of work has increased yet scientific and technological progress is making most training obsolete, in no time (World Bank, 2014). Hence, education systems everywhere face serious challenges and dilemmas, in the task of preparing current and future citizens in a rapidly changing world.

The overarching goal for the post 2015 agenda is to ensure equitable and inclusive quality education for all by 2030. Both developed and developing countries are currently at varying

levels, devising strategies, developing curriculum and education pathways that enable learners to acquire the multi, flexible and diversified competencies for learning for life. In addition, sustainable development demands that every human being acquires the 21st Century skills which include the following:

Table 1.1: 21st Century skills

| Learning & Innovation Skills | Information, Media & Technology Skills | Life & Career Skills - [Values & EQ] |
|---|---|--|
| <ul style="list-style-type: none"> • Critical Thinking & Problem Solving | <ul style="list-style-type: none"> • Information Literacy | <ul style="list-style-type: none"> • Flexibility & Adaptability |
| <ul style="list-style-type: none"> • Creativity & Innovation | <ul style="list-style-type: none"> • Media Literacy | <ul style="list-style-type: none"> • Initiative & Self-Direction |
| <ul style="list-style-type: none"> • Communication | <ul style="list-style-type: none"> • ICT (Information, Communications & technology) literacy | <ul style="list-style-type: none"> • Social & Cross-Cultural Skills |
| <ul style="list-style-type: none"> • Collaboration | | <ul style="list-style-type: none"> • Productivity & Accountability |
| | | <ul style="list-style-type: none"> • Leadership & Responsibility |

In the last two decades, investment in education in Sub-Saharan Africa has not translated into functional knowledge and skills that can transform individuals and economies in which they live (EFA Global Monitoring Report, 2012). There have been consistent wastage rates reflected in the fact that only 30% of the age cohorts complete junior secondary education while only 12% complete the full secondary cycle (World Bank, 2007). The African Economic Outlook (2012) recognizes the pivotal importance of education and appropriate skills as the prevailing solution to mitigating unemployment and vulnerable employment among the youth. It calls for a review, and reform of curricular to prepare youth for knowledge intensive economies. This can be achieved by making provisions for curricula that intricately balances opportunities to pursue skills acquisition in academics, technical and vocational skills education.

The East African Community (EAC) treaty emphasizes cooperation and integrated investments especially in education and research. It aims at preparing citizens to operate and collaborate effectively in a globalized economy (EAC, 2013). The member states propose to develop harmonized programmes for the primary, secondary and tertiary education cycles. The EAC Partner States anticipate that a common framework will promote equal access to education opportunities, harmonized quality assurance and accreditation systems, whose benefits will include free movement of goods and services and people (EAC, 2014).

Kenya effected the last curriculum reform in 1985, when there was a shift from the 7-4-2-3 System to the 8-4-4 system. The purpose of this move was to provide a curriculum that would help learners to gain practical skills and competences to enable them become self-reliant. The curriculum was reformed from one that geared the learners towards white collar jobs, to a more practical oriented curriculum that would enable grandaunts of the system to generate jobs. Emphasis was laid on practical subjects such as Art and Craft, Woodwork, Home Science, Agriculture and Music.

An evaluation of the curriculum in 1995 revealed that the curriculum had a heavy workload across the various subjects in primary and secondary education. Based on the Report on “Total Integration of Quality Education and training” of 1999, a Needs Assessment was undertaken. The findings of the study indicated that the subjects at primary level were too many, the content in each subject for primary was too much, and there was also repetition of content in various subjects. The national curriculum for primary education was then reviewed in 2002 to remove the overloads and unnecessary overlaps within and across subjects, and to mainstream emerging issues.

The revision of the curriculum entailed refocusing the goals of education, the primary level objectives, the subjects’ general and specific objectives. The rationalization of the primary curriculum resulted in some new learning areas. Music, Art and Craft were integrated into one study area called Creative Arts. Home Science, Agriculture and Science were integrated into one study area called Science- which also includes aspects of technology. Geography, History and Civics (GHC) – a combined course was renamed Social Studies and included environmental education, civic education and aspects of Business Studies. The English syllabus adopted a thematic approach to teach various language skills. The themes were derived from things and

situations that learners are likely to interact with. The emerging issues mainstreamed included HIV and AIDs, child labour, environmental conservation and gender issues, among others (KIE, 2002).

Kenya Vision 2030 is the country's new development blueprint covering the period 2008 to 2030. It aims to transform Kenya into a newly industrializing, "middle-income country providing a high quality life to all its citizens by the year 2030". The Vision places great emphasis on the link between education and the labour market and the need to create entrepreneurial skills and competences.

A reform in secondary education and modernization of the primary teacher education programmes are also anticipated. This expectation has far reaching implications on all the other levels of education before and after secondary education to ensure smooth transition from one level to the next. 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 skill development.

The Constitution of Kenya, (2010) advocates for free and compulsory basic education. It also introduced the National and County governments, which gave rise to changes in the administrative and organizational structures of various offices and services. This had implications in education as this information needed to be incorporated in the curriculum to be tandem with the administration of county and national governments as well as other fundamental institutions. Effort was made as a mitigating measure, to include some of the information in Social Studies at primary level and history and government at secondary level. However, the wider changes across the subjects have not been effected to date.

The task force on "Re-alignment of education and training to the Constitution of Kenya" was commissioned in 2010 to advice on how education would be reformed to cater for the aspirations of the Kenya Vision 2030, and be realigned to the Constitution of Kenya; 2010. The task force report emphasized the need for the following:

1. Structuring of the curriculum within competence framework that identifies the knowledge, skills, values and attitudes to be incorporated at each level e.g. entrepreneurial skills;
2. Addressing local needs by including the study of local knowledge and culture;
3. Providing pathways to give equal opportunity to all learners to recognize their talent and achieve their full potential; and
4. Integrating ICT in the curriculum as a key driver of a knowledge-based economy.

Sessional Paper No. 2 of 2015, “Reforming Education and Training in Kenya”, recognizes that 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. The policy recommends reforming the education and training sector to provide for the development of individual potential in a holistic and integrated manner, while producing individuals who are intellectually, emotionally and physically balanced.

Further, the policy recommends a competency based curriculum; establishment of a national learning assessment system; early identification and nurturing of talents; introduction of national values, national cohesion and integration in the curriculum, integration of ICT in the education system and introduction of learning pathways that ensure every learner graduates from the education system with competencies that empower them to exploit their full potential (MoEST, 2015). In this regard therefore, the curriculum reform seeks to shift the Kenyan curriculum from a subject-based curriculum to a competence based curriculum the Needs Assessment study is a first step in informing the conceptualization of what the curricula for various levels should comprise in order to meet the needs and aspirations of learners and wider Kenyan community.

1.3 Justification for the Reform

The fast paced growth of the global economy requires competitive youths with relevant work and life skills that match the growing economies. The recent global economic downturn has further signaled an urgent need to deal with youth unemployment and inequality effectively (OECD, 2012a). Reforms in education must of necessity be targeted towards providing broader curriculum areas based on skill-centered approaches, and appropriate knowledge from non-

academic sources (World Bank, 2014). It further implies that the future of achievements in education and training are anchored on curricula that are progressively changing to guarantee growing opportunities for the youth.

Since the last curriculum review in 2002, there have been numerous developments both on the national and international level. These include the inauguration of the Constitution of Kenya, 2010, the Kenya Vision 2030, the East African Protocol and most recently the Sustainable Development Goals. Sessional Paper No. 2 of 2015, “Transforming education and training in Kenya” puts much emphasis on Science Technology and Innovation.

The curriculum review of 2002 greatly reduced the learning areas in order to reduce on the amount of content that learners had to cover in different subjects. The most affected were the practical oriented subjects in primary education, which were merged and rendered not examinable at national level. This made it convenient for teachers not to teach these subjects at the expense of learners being denied the opportunity to acquire skills in subjects like Art and Craft, Music, Physical Education.

A Summative Evaluation of primary education conducted by KICD in 2009 indicated that there were gaps in the curriculum implementation process. Practical skills necessary for economic development were relegated as theory was emphasized. This limits the capacities for most of the learners who would have otherwise exited the primary level with a foundation for further development of skills and competences. Among the skills gaps identified were; agricultural skills, entrepreneurial skills, vocational and technical skills, innovation and creativity and ICT skills. This implies that the current curriculum does not adequately integrate innovative, vocational and technical skills which are considered to be important for meeting the demand for skilled labour and the country’s goal of industrialization.

The findings also revealed that the cognitive domain was also given more attention at the expense of affective and psychomotor domains, rendering teaching and learning to be examination oriented. It was also indicated that the curriculum did not facilitate adequate acquisition of pre-requisite values such as nationalism and patriotism.

Primary education is intended to provide learners with foundational skills of literacy, numeracy and essential life skills, while secondary education is intended to develop transferable skills.

Studies on global best practices show that at the primary school level, learners require shorter periods to acquire foundational skills.

At the secondary school level, learners require more time to nurture talent and acquire requisite competencies. In essence, such structures reduce wastage and make it possible for a country to leverage its development on the wide array of relevant skills and competencies inculcated through a well thought out and inclusive curricula. The Kenyan system has a long period (8years) for foundational skills and a very short period for secondary school (4 years) which is not sufficient for acquiring intended skills. This calls for a review of the education system to introduce a shorter Primary Cycle and a longer Secondary School Cycle.

The shift to a competence-based curriculum will provide the opportunity to set standards against which student learning can be assessed taking into consideration the individual learner's interests, abilities and talents. The reform also seeks to create different pathways to enable students have an opportunity to pursue different career pathways of their interest. The Needs Assessment study provides the basis on which the Ministry of Education and policy-makers will make critical decisions to set the various learning areas as well as the relevant pathways. This will drive the education sector reforms that should lead the country to achieving the tenets of the Constitution of Kenya 2010 and the Kenya Vision 2030. All these perspectives have implications on the primary level of education and necessitate a more comprehensive alteration of the education sector. This makes the need for an education reform urgent.

1.4 Research Objectives

The specific objectives of the study were to:

1. Establish desired **general primary needs** for curriculum reform
2. Determine desired **competencies** for the primary level of learning
3. Determine the **talent** identification and nurturing strategies to be adopted at the primary level of the curriculum
4. Establish desired **content/learning areas/pathways** for competency based curriculum to provide quality, relevant and accessible education
5. Identify **resources** suitable for competency based curriculum at the primary level
6. Determine desired **pedagogical approaches** for competency based curriculum at the primary level

7. Establish formative and summative **assessment** modes for competency based curriculum at the primary level
8. Identify **contemporary issues** in society that need to be addressed by the curriculum

1.5 Scope of the study

The Needs Assessment survey was carried out for the levels of education for which KICD is mandated to develop curriculum. This volume reports findings for the primary education level.

1.6 Rationale for the study based on the Context

The hallmark of relevance of any curriculum to society is the promptness with which the curriculum adapts to changing societal needs. However, owing to the long time span since the last review in 2002, the curriculum is not in tandem with the current needs and aspirations of the nation as articulated in various policy documents. The Ministry of Education acknowledges the need to reform the secondary school curriculum with the emphasis shifting from knowledge reproduction to knowledge production and, to make ICT central to it. The proposed curriculum reform has to be in tandem with the Constitution of Kenya 2010, Kenya Vision 2030 and the East Africa Community Protocol.

The mandate to reform the curriculum lies with the KICD. This will include; reviewing of learning materials and orientating the serving teachers and other field education officers such as the quality assurance officers, curriculum support officers and Education Assessment Resource Centre (EARC) officers. The Institute needed to undertake this Needs Assessment study in order to ascertain the actual needs of the various stakeholders in primary education, and to inform policy decision-making on the various aspects of the reform.

1.7 Summary

The demand for quality education is leading countries to adapt new curriculum content, pedagogical skills and educational structures that emphasize the importance of producing learners who can take initiative, and contribute to innovation in products and processes. Education should be seen as a basis for development or a means for improving life and this can be in technology, preventing disease, improving governance, agriculture and protecting the environment among others. It should enable people to understand local, regional and global contexts and shape their mindsets and actions in their daily life. Kenya's transformation into a

newly industrialized country is hinged on the provision of a highly qualified human resource. The country, therefore, needs an education system that will foster innovation and facilitate the much needed social, economic and environmental development for sustainability.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1: Introduction

This chapter presents reviews of discussions of literature on curriculum issues that relate to the core aspects of the study. First, a brief on relevant theories in curriculum has been presented, followed by a situational review of the study within the field of education and discipline of curriculum studies.

The core aspects of the study have been divided into themes or objectives that have guided the Needs Assessment survey. These include the general societal needs, competencies, values and attitudes, learning areas, nurturing of talents, resources, assessment and contemporary and emerging issues. Among the articles reviewed include journals, policy documents, books, grey areas such as circulars and other empirical studies.

2.2 Definition of Key Concepts

2.2.0. General overview

This section describes different understanding by scholars and other authors on meaning of key concepts that have been used in this study. This has been done to give meaning to the concepts used repeatedly in the study. They are not in any order of priority but they represent the themes in the study.

2.2.1. Curriculum

Curriculum is described as a social construct, (Brady and Kennedy, 1999) that is grounded in the culture of the people. It is also considered extremely important that the content of a curriculum should support holistic student development and should transmit the local culture (UNESCO, 2000; Brady and Kennedy, 1999). It should also fulfill societal needs (Bugotu et al., 1973).

A curriculum must be broadened beyond traditional knowledge-based education to facilitate the development of students' ability to think and act creatively and morally (UNESCO, 2000;

Downs Perry, 1994) and to successfully practice competencies (such as problem-solving, decision-making and negotiating) considered necessary for life in the 21st century (Dimmock & Walker, 1998; Tien, Ven and Chou, 2003). Furthermore, for a curriculum to do its work successfully, it must be accessible to all students (Brown, 2003) and should support economic and social development. In a broader sense, curriculum can be viewed as a roadmap for achieving socially agreed development and education goals that embeds society's vision, knowledge, skills and values needed to live in and change the society.

As a field of study and discipline, curriculum has been expounded by Otunga, Odero and Barasa (*Eds*, 2011) as a dynamic field that continually develops through a process, in a given design and within a given social and physical context.

All curriculum decisions are defined in a framework that establishes the subjects, the time frame and particular content, teaching learning strategies to be adopted and assessment criteria to be used. Countries around the world organize education along curriculum framework. This defines the perimeters within which the curriculum must be developed. It has many components; among them are the underpinning principles and core values, general objectives, expected learning achievements, guidelines on teaching and learning process and assessment (UNESCO, 2013). Further the paper opines that it is the framework that provides coherence to the guidelines and national standards that enable and support the development of the school curriculum. This is affirmed by the intentions of KICD to develop a curriculum framework after the engagement with the stakeholders during needs assessment.

The curriculum is designed for different levels of education systems. The process of curriculum development in Kenya though centralized involves many stake holders and responds to a wide range of society requirements. The curriculum seeks to encompass the dynamics of the development of knowledge and various disciplines prevailing in the society. Taking these dynamics into account is a sure way of preparing learners adequately both for their personal performances and in the labor market as well as for their citizenship (IBE No. 15, 2015).

2.2.2. Learning areas

The school curriculum defines learning areas as content to be taught and learned, by whom, when and where (UNESCO, 2015). The organization and sequencing of curriculum facilitates learning. Within the learning areas, content, teaching and learning experiences, assessment and resources are determined by the goals of education from which general and level objectives are derived.

2.2.3. Competencies

Competency is a set of defined behaviors that provide a structured guide enabling the identification, evaluation and development of the behaviors in an individual. Some scholars consider ‘Competence’ to mean a combination of theoretical and practical knowledge, cognitive skills, values and behavior used to improve performance; or a description of skills, knowledge, attitudes and behaviors required for effective performance of a real-world task or activity (Weddel, 2006). Others define it as the ability to choose and use cohesive or integrated combination of knowledge, skills and attitudes with the aim to realize a task in a certain context (Kouwenhoven, 2003).

Further, competencies are outcomes that learners should have acquired by the end of their general education in order to succeed in academics, in self development, in acquiring employment and success in jobs, and inclusion in a knowledge society. Job competencies are not the same as job task. Competencies include all the related knowledge, skills, abilities, and attributes that form a person’s job. This set of context-specific qualities is correlated with superior job performance and can be used as a standard against which to measure job performance as well as to develop, recruit, and hire employees.

In essence therefore, Competency-based curriculum is a system of curriculum derived from an analysis of a potential or actual role in modern society and that tries to certify student progress on the basis of validated or demonstrated performance in some or all aspects of that role (Edwards et.al, 2009). In other words, competencies encourage a mastery of the relevant content knowledge and of the associated skills; both cognitive and practical and includes also internalization by the learner of the associated values (UNESCO, 2015). Competency is related to capacity, that is, a person’s ability to evaluate information received and make choices based

on the same. It is a word used to denote a person's ability to acquire, retain and evaluate information (Drew, Hardman & Hosp, 2008).

2.2.4. Values and attitudes

The Needs Assessment survey not only defined competencies as abilities but also as values and attitudes to be acquired by the time learners leave an education cycle. Values are the principles and fundamental convictions which act as general guides to behavior, the standards by which particular actions are judged as good or desirable (Halstead, 2000). Other views indicate that values are the ideals that give significance to our lives, reflected through the priorities that we choose and that we act on consistently and repeatedly (Brian, 2004). With the emphasis on technology, innovation and science as a means of attaining the Vision 2030 goals there is a tendency to pay less attention to moral and ethical issues which need to be given equal measure of attention in development.

Value education include explicit and implicit school-based activity which promotes student understanding and knowledge of values, and which develops the skills and dispositions of students so they can enact particular values as individuals and as members of the wider community. The things, ideas beliefs and principles that are of worth to a person shape his or her values. People's values help to define who they are and help determine the choices they make.

Living values provide principles and tools for development of the whole person recognizing that the individual is comprised of the physical, intellectual, social emotional and spiritual dimension. Education is best enhanced by positive values and attitudes. Therefore it is important for the education system and the curriculum in particular to foster values and the teachers to understand and apply values even as they emphasize on a competency based education.

2.2.5 Pedagogy

Instructional strategies and techniques of carrying out instruction in the delivery of curriculum content are referred to as strategies. Pedagogy deals with the practice of teaching and learning. This is where the teachers bring in the 'how' of teaching using instructional designs to convey content to learners in order to achieve learning outcomes stated in the objectives.

For effective curriculum implementation, the teachers must have the capacity to interpret the curriculum through instructional strategies and techniques. These determine how much is learned by the learners. Often, teachers rely on the traditional approaches of teacher centered learning in their effort to cover the syllabi. However with the introduction of the 21st Century skills and the competence based curriculum, the instructional methods must change to more learner centered approaches. Osakwe (2009, in APHRC, 2010) explains the learners centered approaches where the teacher seeks to bring about the change in behavior of learners by imparting knowledge and skills in an interactive way. This is where the learner constructs meaning from the experiences received in their own perception.

2.2.6 Resources

These refer to any inputs that are use in the learning environment to effectively achieve the desired outcomes. These could be human, infrastructure, realia or financial resources. They are also referred to as teaching and learning curriculum support materials. Resources in education include both book and non book materials and any other learning environment that provides any other learning environment that provides a learning experience to a learner (KIE, 2010).

Resources in education play a very important role in facilitating learning (McAliney, 2009). For effective curriculum implementation, quality physical and human resources are required. Indeed, it is difficult to envisage learning without resources. Education resources include both book and non-book materials, and any other learning environment that provides a learning experience to a learner. Educational resources are critically important for ensuring wide access to quality education (UNESCO, 2002) and are therefore selected and used to stimulate interest and motivate learning.

2.2.7 Assessment

This refers to measuring learning outcomes. In the education context, it is the process of ascertaining whether students have attained curricula goals. Otunga, et. al (2011: 121) refer to assessment as evaluation, and go on to define it as *'all systematic actions that focus on determining whether the curriculum...is performing as designed...and establishing effects of the curriculum on its users'*.

Assessing learning outcomes is of great concern among stakeholders in Kenya. The main concern being the lack of a holistic approach to learning since focus is greatly on performance in a few learning areas. It fails to capture the whole learning that has taken place. Saltery (1989) defines education assessment as a term which includes all the processes and products that describe the nature and extent of children learning, its degree of correspondence with aims and objectives of teaching and its relationship with the environments which are designed to facilitate learning. Assessment is an important component in the teaching and learning process, since it's the basis of evaluating of the effectiveness of the implementation process of a curriculum. Teachers and learners use various modes of assessment to determine performance as well as identify gaps. The results and feedback from assessment enables teachers, learners, institutions and governments to make decisions on curriculum.

2.2.8 Contemporary and Emerging issues

The cross-curricular issues are commonly areas which by their very nature have a strong impact psychosocial behavior of learners. These are issues that touch on a number of different aspects of the society and affect learners at all levels. These issues otherwise known as pertinent and emerging issues, encompasses core-social and human values which manifest themselves in more than one discipline: hence the term cross cutting. Issues that are considered pertinent and hence mainstreamed as study areas in the curriculum include Life Skills Education (LSE), HIV and AIDs Education, Gender Education, Drugs and substance Abuse (DSA) prevention, Child's Right Education, Child labour prevention, Integrity & Good Governance, Guidance and Counseling Service, Environmental Education and Health Education. Other issues that have been perceived to be pertinent in the recent past are; Peace Education, Values/Moral Education, Disaster Risk Reduction, Education for Sustainable Development (ESD) and National Values as enshrined in the Constitution, to mention but a few.

2.2.9 Talents

There is no one universal definition of talented learners. In the United States of America, The No Child Left Behind Act (Elementary and Secondary Education Act, 2002) define Gifted and Talented as children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need

services and activities not ordinarily provided by the school in order to fully develop those capabilities. In Australia Gifted and talented learners at School are defined as those who demonstrate the potential for a high level of performance in different ability areas, when compared to others of similar age, background and experience such as intellectual; Creative; Artistic; Social; Physical; Spiritual (Department for Education and Children's Services, 1994).

In Korea, a gifted person is defined as one who possesses extraordinary innate abilities or visible talents requiring special education to nurture them. The purpose of gifted education is to promote self-actualization of individuals and have them contribute to development of society and nation by scouting for gifted and talented persons and carrying out education suitable for ability and aptitude in accordance with regulations so they can develop innate potential.

In Kenya, Koech (1999), Kochung', (2003) and Kang'ethe, (2004) defined gifted and talented children as those who at any educational level are identified as possessing demonstrated or potential abilities that give evidence of high performance capabilities in areas such as general intellectual ability, specific academic aptitude, creative and productive thinking, leadership ability, visual and performing arts and psychomotor abilities. According to Kinyua (2014) gifted and talented children as those with outstanding talents, who perform or show the potential of performing at remarkably high levels of accomplishment when compared with others of their age, experience or environment.

The Kenya government acknowledges the need for primary school curriculum to address individual talents of learners. The curriculum tends to cater for talent in traditional academic subjects, by recognizing academic achievement and excluding learners who are talented in sports and performing arts. The curriculum to be developed should be an inclusive curriculum to cater for the talented learners.

2.3 Situating the study within the Field of Education and Curriculum Discipline

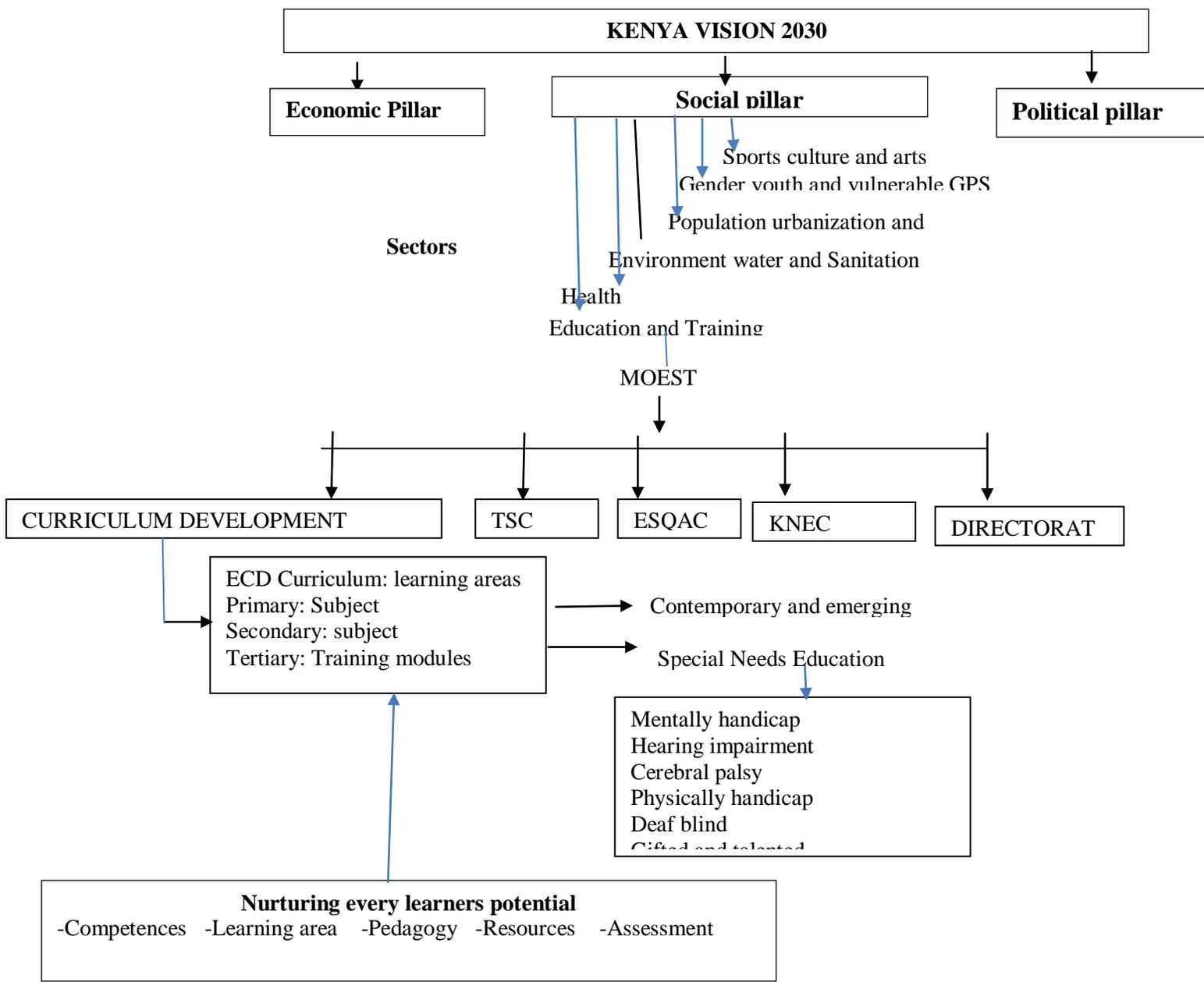
The aspect of curriculum development can be traced to the national aspirations as envisaged in the Kenya Vision 2030. The goal of curriculum reforms is to achieve the vision of '*Nurturing Every Learners Potential*'. This seeks to elicit competencies and values, learning areas,

pedagogy, resources, assessment and development of talents as will be guided by the Curriculum Framework for Basic Education.

For every level of education, contemporary and emerging issues as well as special needs education permeate through as they essentially affect all learners irrespective of level of learning. At every level therefore curriculum is developed where learning areas indeed takes cognizance of the contemporary issues as well as learners with special needs.

Curriculum development is nested under the larger umbrella of the MOE with the other arms of the Ministry, such as the TSC, education Directorates, ESQAC and KNEC. All these work together to fulfill aspirations of the Social Pillar of the Vision 2030 alongside other sectors. Situating the vision of the curriculum reforms to the Kenya Vision 2030 can be espoused illustrated as Follows

Figure 2.1: KenyaVision2030



2.4 Review of Relevant Theories

2.4.0 General overview

Curriculum theory is an academic discipline devoted to examining and shaping educational curricula. Within the broad field of curriculum studies, it includes both the historical analysis of curriculum and ways of viewing current educational curriculum and policy decisions. There are many different views of curriculum theory (Kliebard, 2004). Kliebard discusses four curriculum groups that he refers to as humanist (or mental disciplinarians), social efficiency, developmentalist (or child study), and social meliorists.

2.4.1. Curriculum theory

2.4.1.1 Humanists

A common criticism of broad field curriculum is that it lays more emphasis on mental discipline and education. "Mental disciplinarians" and Humanists believe in all students' abilities to develop mental reasoning and that education was not intended for social reform in itself but for the systematic development of reasoning power. Good reasoning power would lead to the betterment of society. Harris described the subjects to be taught as the "five windows" into the soul of the student: "grammar, literature and art, mathematics, geography, and history" and prescribed it in that order to be taught (Kliebard, 2004, p. 15). Some critics view this group as having too much emphasis on the "classics" as determined by the dominant groups in a society.

2.4.1.2 Social meliorism

This school of thought believes that education is a tool to reform society and create change of the better. The socialization goal was based on the power of the individual's intelligence, and the ability to improve on intelligence through education. An individual's future was not predetermined by gender, race, socio-economic status, heredity or any other factors. "The corruption and vice in the cities, the inequalities of race and gender, and the abuse of privilege and power could all be addressed by a curriculum that focused directly on those very issues, thereby raising a new generation equipped to deal effectively with those abuses" (Kliebard, 2004, p. 24). Some critics contend that this group has goals that are difficult to measure and a product that has slow results.

2.4.1.3 John Dewey's curriculum theory

Dewey felt that the curriculum should ultimately produce students who would be able to deal effectively with the modern world. Therefore, curriculum should not be presented as finished abstractions, but should include the child's preconceptions and should incorporate how the child views his or her own world. Dewey uses four instincts, or impulses, to describe how to characterize children's behavior. The four instincts according to Dewey are social, constructive, expressive, and artistic. Curriculum should build an orderly sense of the world where the child lives. Dewey hoped to use occupations to connect miniature versions of fundamental activities of life classroom activities. The way Dewey hoped to accomplish this goal was to combine subject areas and materials. By doing this, Dewey made connections between subjects and the child's life. Dewey is credited for the development of the progressive schools some of which are still in existence today.

2.4.1.4 Social efficiency

Theorists such as Ross, Bobbitt, Gilbreth, Taylor, and Thorndike are Social efficiency proponents who sought to design a curriculum that would optimize the "social utility" of each individual in a society. By using education as an efficiency tool, these theorists believed that society could be controlled. Students would be scientifically evaluated and educated towards their predicted role in society. This involved the introduction of vocational and junior high schools to address the curriculum designed around specific life activities that correlate with each student's societal future. The socially efficient curriculum would consist of minute parts or tasks that together formed a bigger concept. This educational view was somewhat derived with the efficiency of factories which could simultaneously produce able factory workers. Critics believe this model has too much emphasis on testing and separating students based on the results of that testing.

2.4.1.5 Developmentalism

Developmentalists focus attention to the development of children's emotional and behavioral qualities. One part of this view is using the characteristics of children and youth as the source of the curriculum. Some critics claim this model is at the expense of other relevant factors.

2.4.2. Curriculum Reform Theories

Since curriculum reform engages with redesigning the learning context, one of the curriculum reform theories is Instructional Design theory.

2.4.2.1. *Instructional – Design Theory*

This theory offers explicit guidance towards a new curriculum that explains how to help students learn and develop in the wake of emerging globalization. Learning is associated with cognitive, emotional, social, physical and spiritual development (Reigeluth, 1996). “Theory One” developed by Perkins, in *Smart Schools* (Perkins, 1992) describes the instructional design theory which offers guidance for fostering cognitive learning as follows: Clear information, in terms of goals, knowledge needed and performance expected; Thoughtful practice, in terms of opportunities for learners to engage in learning actively and reflectively; Informative feedback, in terms of clear and thorough counsel to learners, and; Strong intrinsic or extrinsic motivation.

Instructional design theory is design-oriented because it focuses on the means to attain given goals for learning or development. It offers guidelines about the methods to use in different situations in curriculum implementation. Values play an important role in the instructional design theory. They underlie both the goals the curriculum pursues and the methods it offers to attain the goals. This will articulated in this BECF which takes cognizance of the place of values as an anchor for the pillars of curriculum.

2.4.4.2 *Importance of Instructional Design Theory in Curriculum*

As Pogrow (1996) states, the history of educational reform is one of consistent failure of major reforms to survive and become institutionalized. Pogrow further asserts that the single biggest tool in promoting curriculum reform has been advocacy. To help educators to improve education, it is imperative that there be public or stakeholder participation. This should also be done in other areas of education policy, as well as systemic change in the educational system (Bathany, 1991; Reigeluth & Cartinkle, 1994). Systemic change emphasizes the need to give organizations considerable autonomy to manage themselves with the purview of corporate vision, rather than being directed from above (Ducker, 1989; Hammer & Champy, 1993). This allows corporations to respond much more quickly and appropriately to their customers and

clients' needs. The Institute aspires to engage stakeholders as well as parent participation in its advocacy for a competence based curriculum.

Globally, fundamental changes in the education systems have important implications for curriculum reform. Learners need to be able to think about and solve problems, work in teams, communicate through discussions, take initiatives and bring diverse perspectives to their learning. In addition, pupils need to learn more, yet they have little time available to learn it (Lee & Zemke, 1995). Learners also need to demonstrate an impact of the achievement of national goals of education. This is best explained by the theory expounded by John Hattie-

2.4.4.3 Visible Learning theory (2012).

Visible Learning means an enhanced role for teachers as they become evaluators of their own teaching. According to John Hattie Visible Learning and Teaching occurs when teachers see learning through the eyes of students and help them become their own teachers. It refers to making student *learning* visible to teachers so that they can know whether they are having an impact on this learning that is an important component of becoming lifelong learners – something basic education wants students to value. The 'learning' part of visible learning is the need to think of teaching with *learning* in the forefront and with the idea that we should consider teaching primarily in terms of its *impact on student learning*.

When the *teaching is visible* the student knows what to do and how to do it. When the *learning is visible* the teacher knows if learning is occurring or not. Teaching and learning are *visible* when the learning goal is not only challenging but is *explicit*. Furthermore, both the teacher and the student work *together* to attain the goal, provide feedback, and ascertain whether the student has attained the goal. Evidence shows that the greatest effects on student learning come when not only the students become their own teachers (through self-monitoring, and self-assessment), but the teachers become learners of their own teaching. In successful classrooms, both the teaching and learning are visible. This way of learning is essential for criterion referenced assessment which seeks to make assessment part of learning, and is an essential component of the competence based curriculum.

2.5 Review of Relevant Policy Documents

2.5.0. General overview

Education is the key to well-being and prosperity as it is impossible to attain high levels of economic development and high standard of living without a highly educated workforce. This is why education is well structured and guided by various national and international policy guidelines. Policy documents reviewed include the Kenya Vision 2030, the Kenya Constitution, 2010, Sessional paper No. 2 of 2015, the Basic Education Act (2013), National Education Sector Plan (2015), KICD policy documents, EFA goals as well as the Sustainable Development Goals, among others.

Review of policy documents is necessitated by the fact that it is a national priority to align the curriculum to address the aspirations of these policies as well as the EAC protocol. The government is fully committed to achieving its national and international policies in education.

2.5.1 Societal needs

Every society has certain needs that must be fulfilled in order to succeed. Society influences curriculum development because curriculum needs to be relevant to the needs of the society. Consequently, as the needs of the society change, curriculum also needs to change in order to reflect those changes and make it relevant (Treadaway, 2003).

The societal needs are clearly spelt out in the National Goals of Education. These goals of education are embedded in the Vision 2030 (Republic of Kenya, 2012) and include: Promote national unity and patriotism; Enhance social, economic, technological & industrial needs for national development; Promote individual development and self-fulfillment; Inculcate sound moral and religious values; Promote social equality and responsibility; Respect for Kenya's rich & varied cultures; Implant international consciousness & positive attitudes towards other nations and; Embrace positive attitudes towards good health and environmental protection (KIE, 2008).

During the National Conference on Education (2003), it was noted that there was need for the government to achieve Universal Primary Education (UPE) goal by 2015, with the overall goal of attaining EFA by 2015. The attainment of UPE would ensure that all Kenyan children

eligible for primary schooling had opportunity to enroll and remain in school to learn and acquire quality education. However, various challenges with respect to access, equity, quality and relevance, continued to constrain the provision of quality education and services. One of the recommendations made was that the MOE, through KIE, should rationalize the curriculum for primary education to incorporate health and nutrition learning and to place increased emphasis on Physical Education and sports.

Over time, Policy documents have articulated the direction the country needs to take in order to propel its development agenda. According to the recommendations made in the Sessional paper No. 1 of 2005 on Policy Framework for Education, Training and Research, a breakthrough towards industrialization can only be achieved through application of technology. It was necessary to give prominence to technical education in all sub-sectors. The introduction of many practical and vocational subjects was meant to prepare students for the world of work.

The Kenya Vision 2030 places great emphasis on the link between education and the labour market, the need to create entrepreneurial skills and competences, and the need to strengthen partnerships with the private sector. The curriculum is supposed to develop these skills and competencies. However, The Task Force on the Re-Alignment of the Education Sector to the Constitution (2012) noted that the quality of education is not clearly spelt out so that the curriculum delivery can focus on development of specific expected competences to be assessed. The task force recommended structuring of the curriculum within a skills and competences framework that identifies the knowledge, skills and competences all learners will acquire, and which will provide both vertical and horizontal coherence.

The NESP (2015) makes it very clear that the curriculum is expected to empower the citizens with necessary knowledge and competencies to realize the national developmental goals. Further societal aspirations can only be realized through the implementation of a well designed dynamic and responsive or relevant curriculum (Republic of Kenya, 2015). Curriculum is developed based on the identified societal needs and the dynamism of the industry and the job market. Consequently the curriculum reform has been preceded by needs assessment because the stakeholders ideally should participate in this process.

Education should prepare workers for the 21st century by teaching skills necessary for industry and commerce. Kenya Vision 2030 aims at making Kenya a newly industrialized, middle income country providing high quality life for all its citizens by the year 2030. The Vision is based on three pillars namely; the economic pillar, the social pillar and the political pillar. 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: have embraced entrepreneurship, be able to engage in lifelong learning, perform more non-routine tasks, be capable of more complex problem-solving, be able to take more decisions, understand more about what they are working on, require less supervision, assume more responsibility, and as vital tools towards these ends, have better reading, quantitative reasoning and expository skills.

These expectations have 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 skill development.

The Task Force on re-alignment of the Education Sector (2012) was mandated to review and align the education, training and research sector in accordance with the Constitution. Among the issues raised in relation to the societal issues in the curriculum were that; there was too much focus on academics and university education, thus looking down upon any other post-secondary education. This had impacted negatively on middle level training which in essence produced the bulk of the human resource required to drive the country towards Vision 2030. The implication was that the primary, secondary and teacher education curricula did not address the dictates of Vision 2030, the Constitution and regional integration.

The content of the curriculum has increasingly been considered dated with regard to the skills and values needed to operate in the current world full of both uncertainties and opportunities. Furthermore, a relevant curriculum is required to instill positive values, mould character, moral

and spiritual formation of the learners. Aligning the curriculum to address the aspirations of Kenya Vision 2030, the Constitution 2010 and the EAC treaty is a priority of the National government (Republic of Kenya, 2012). The content for Basic Education would therefore need to be designed with the view of equipping the learners with relevant knowledge that emphasizes on technology, innovation and entrepreneurship (GOK, 2007). In addition, the learners would have an opportunity to develop their full capacities in order to live and work with dignity, enhance the quality of their lives, make informed decisions and continue with learning as a lifelong engagement.

2.5.2 Competencies

Over the years, the Kenyan curriculum has been objective based with limited flexibility in terms of content packaging and autonomy for the teacher and learners. Apart from Kenya, the other EAC member countries have adopted competence based curriculum and assessment. The Basic Education Act (2013) stipulates policy and guidelines on curricula and points out that among other activities undertaken by KICD on curricula developed, is to secure the competencies and learning outcomes for the relevant structures and levels under the National Qualifications Framework.

Additionally, the Sessional paper No.2 of 2015 has clarified the strategy on the policy on curriculum and assessment by stating that KICD is expected to develop a repertoire of skills and competencies necessary to inform a globally competitive economy. The curriculum policy (2015) points need to have the curriculum spelling out expected competencies at every level. Further, the curriculum should be designed to equip learners with relevant knowledge, skills, competencies and values to enable them develop their full potential. This echoes what is also contained in NESP of 2015 which affirms that curriculum developed will be competence based. This will ensure that at each level, desired outcomes are achieved and learners can progress with diverse interests and abilities.

Although these competencies should be addressed in the curriculum, they have implications on the policy makers and the implementers. The school managers need necessary skills and

competences to monitor standards and quality of curriculum delivery as well as quality of teaching in their schools. Further teacher trainers at all levels of teacher training education need the necessary skills and competences to impart on their teacher trainees. Additionally, Quality Assurance and Standards Officers should have the required skills and competences to add value to the standards and quality of education in the learning institutions.

The Task force (2012) recommended core curriculum competencies to be used. These are presented in levels from preprimary to senior secondary, and starts with very basic competencies. As learners move from lower primary to upper primary, the foundational competencies get enhanced and firmed up in secondary level. The Task Force recommended some core competencies that should be acquired by learners and include: Communication skills, manipulation skills, social skills, environmental awareness, numeracy, writing, enquiry skills, ICT, talent potentials, observation skills, entrepreneurial skills, ethical skills, investigative skills among others.

2.5.3 Values and attitudes

Article 10 of the Constitution of Kenya 2010 (GoK, 2010) contains the national values and principles of governance to be upheld by all Kenyans. Education provides the best medium of inculcating these values. The values include patriotism, national unity, sharing and devolution of power, the rule of law, democracy and participation of the people; human dignity, equity, social justice, inclusiveness, equality, human rights, nondiscrimination and protection of the marginalized; good governance, integrity, transparency and accountability; and sustainable development.

In Article 11 of the Constitution of Kenya 2010, culture is recognized as the foundation of the nation and as the cumulative civilization of the Kenyan people and nation. Education and training therefore is expected to: Promote all forms of national and cultural expressions through literature, the arts, traditional celebrations, science, communication, information, mass media, publications, libraries and other cultural heritage; Recognize the role of science and indigenous technologies in the development of the nation; and promote the intellectual property rights of the

people of Kenya. The aspirations of the Constitution of Kenya 2010 therefore should be embedded in the curriculum and taught to all learners across the levels.

In addition, the Kenya Vision 2030 states that the journey towards widespread prosperity involves building a just and cohesive society that enjoys equitable development in a clean and secure environment. Some of the related major issues that need to be addressed within education have to do with living together in a cohesive society, having healthy individuals and education that supports personal growth and development.

2.5.4 Learning areas

Currently, the primary school level has 12 subjects. Technical subjects are only offered in limited number of secondary schools; hence pupils in primary schools are not exposed to technical subjects. The Sessional paper no. 2 of 2015 expounds on the need to teach foreign languages in our system of education for global competitiveness. This may imply secondary education to cover more foreign languages and give opportunities to primary schools to teach foreign languages. Aspects of education for sustainable development were also some of the key recommendations made in this policy. Among other things that the curriculum should develop are the 21st Century skills, and learners who maintain, improve and sustain the environment.

When the Constitution of Kenya 2010 was promulgated, the onus was on KICD to ensure that the curriculum was in line with the spirit of the Constitution even before the curriculum reforms. This necessitated amendment of some parts of the curriculum where deliberate effort was made to respond to the needs of the Constitution, while making the subjects relevant and meaningful. The reforms therefore will further address appropriate areas in the Constitution. Other areas to be developed should enable learners to acquire relevant skills, knowledge and attitudes.

Although current curriculum boasts of a wide spectrum of subjects, it has often been seen to lack flexibility, not cater for regional disparities and lacking in pathways to direct learners at the secondary levels. According to the Curriculum Policy (2015), the curriculum has no emphasis on accelerated or flexible modes of learning; neither does it permit entry and re-entry at different levels. The learners are not able to make informed choices as they decide on career paths and

areas of interest. The Sessional paper No. 2 of 2015 clearly states that the curriculum will provide knowledge skills and values, and competencies to enable learners to move seamlessly from the education system to either further education or to technical/vocational areas. The curriculum is also expected to apportion a certain percentage of the content to meet regional needs (Republic of Kenya, 2015).

Kenya Vision 2030 lays importance on certain learning areas. Agriculture is seen as a major contributor to the country's GDP. It further echoes the importance of mainstreaming Science, Technology and Innovation in the school curriculum (Gok, 2007).

2.5.5. Assessment

For the learning process to be complete, assessment must take place, whether it is school based or at the end of cycle. Those that are school based are diagnostic and for placement, while the national end of cycle examinations are used for transition to the next level. Assessment can either be formative or summative. The summative assessment is usually carried out by KNEC through national examinations, while other National assessments check the attainment levels of certain competencies.

Summative assessments are based on utilization of a single metric to assess basic knowledge and skills levels acquired by students. Used this way, it is an instrument of accountability. This mode of assessment is preferred since teachers are able to check in a linear manner the level of assimilation of information, facts and concepts passed to learners. On the other hand, formative approach supports the learning process. The teacher is able to understand how students are leaning, to identify problems the students may face in the learning process and to use feedback to ensure that all have the opportunity to learn (UNESCO; IBE, 2015)

Among the shortcomings of the assessment modes in Kenya as outlined by the Taskforce Report (2012) and the Sessional Paper No.2 of 2015, is too much emphasis on examination based certification at the end of each cycle, lack of open opportunities for learners to pursue further education and lack of harmony with the educational structures of East African countries. In

addition, teachers are not adequately trained in test development and evaluation procedures Gove and Cvelich (2010).

Due to the importance attached to the examinations and too much competition, assessment is no longer seen as part and parcel of the teaching learning process but as a gateway to determine who can proceed to the next level of education. The policies recommend that in the reformed curriculum, competencies and skills will be assessed and that the introduction of standardized assessment testing across the basic education cycle will address this need (Republic of Kenya, 2015). Further forms of assessment have been proposed for every level in the Taskforce Report (2012). They include observations, pupil profiling in core learning areas and social development as well as standardized assessment. Quality assessment therefore, will ensure competencies in the curriculum are attained. This is because assessments measure learner competencies and evaluates the learning that has taken place.

2.5.6. Resources

According to the Taskforce Report (2012) the implementation of Free Primary Education, though well intended had a broad curriculum requiring many textbooks and involved many other infrastructure and resources. Most schools lacked basic requirement such as teaching and learning materials, tuition equipment and physical facilities. Teachers especially for the practical and vocational subjects were also inadequate.

As Textbooks play a crucial role in the education process, the government allocates 60% of the tuition vote on textbooks annually since 2003 when this began. It is expected that currently, there should be 1:1 pupil textbook ratio in order to cater for instructional materials for learners. However this is not the situation and learners are still sharing textbooks in a ratio of 1:4 or more in some schools (Buhere, 2015).

2.5.7. Contemporary and Emerging issues

The various contemporary and emerging issues have been identified from different policy documents such as the Constitution of Kenya 2010, Kenya Vision 2030, Education for Sustainable development (ESD), Children's Act (2001), Millennium Development Goals

(MDG), Sustainable Development Goals (SDG), and NESP (2015) among others. Each of these policy documents emphasizes different aspects of the cross cutting issues and education has been identified as the wheel to nurture them among learners across all levels. These policy documents articulate that learners across all levels irrespective of their age are faced with contemporary lifestyles and challenges that necessitate decision making competencies. In particular, the Sessional paper No. 2 of 2015, emphasizes that learners have issues ranging from sexuality, drug and substance abuse, media influence in these times of technological advancement, and political and social scenarios that influence their lives (Republic of Kenya,2015). Although the curriculum has Life Skills Education Curriculum as well as curriculum support materials, cross cutting issues remain a critical aspect of education, more so because emerging issues are not taught in most schools (KICD, 2014).

The Education Sector Policy on HIV and AIDs (MOEST, 2013) and the Policy on Gender (MoE, 2007) state that these contemporary issues should be mainstreamed into the existing curriculum. Teachers should be given capacity to do this so that they in turn can help learners to benefit from and cope with many contemporary and future challenges. The Sessional Paper No.1 of 2005 has paid attention to effective teacher development and utilization, while Kenya Vision 2030 lays emphasis on quality education and training. These can only be actualized through effective capacity building of teachers.

The Constitution of Kenya 2010 gives more details on contemporary and emerging issues and the direction education should take. This is stipulated in several Chapters such as two and six which deal with principles of governance, leadership and integrity; chapter four deals with bills of rights which include children's rights; part two deals with environment; part three deals with specific application of rights like children rights and persons with disabilities; chapter five part two deals with environment and natural resources; while chapter twelve deals with national security (GoK 2010). All these are cross curricular issues that need to be in cooperated in the current curriculum reforms across all levels of education, lest it is rightly declared unconstitutional. Other cross cutting issues like technology, health issue and drug abuse are also emphasized in the Vision 2030.

Although guidance and counseling is not a crosscutting area, education needs to address personal development and mentor, mold and nurture the learners. This is appreciating that some learners across all levels come from difficult social economic contexts. With the emphasis of parental and community engagement in education in the education policies, the curriculum reforms will engage all stakeholders including parents and members of the public.

The purpose for MOE requiring that the Task Force considers the issue of mentoring and molding in the Terms of Reference demonstrate the importance of an individual's right to dignified growth and development, free association and free speech. This is facilitated by the education system, which prepares individuals to participate effectively in society in an informed and acceptable way on the basis of values aimed at national cohesion and unity.

2.5.8. Talents

According to the curriculum policy (2015), the curriculum as it is does not give linkage of talents to development of careers, further education or training. There is need to address the aspects of identifying, nurturing and developing talents among learners. A composite part of development of talents is innovation which takes the talent forward to the level of benefiting from the value of the talent. Learners need to develop their talents and get to the point where they can be entrepreneurial enough to generate income from what they have made or what they can do . Kenya Vision 2030 calls for curricula that develop learners' entrepreneurial skills, competencies and talents. Additionally, Sessional paper no. 2 of 2015 expounds on the need to develop and nurture talents for global competitiveness while the Taskforce Report mentions identification and advancement of talents among core curriculum competencies.

2.6 Review of Curriculum in other Contexts

2.6.0. General overview

The process of curriculum development is initiated by a Needs Assessment which basically looks at the situation of '*what is*' and '*what should be*'. This calls for systematic investigation to collect data and establish the need for curriculum reforms. Results of the Needs Assessment supported by related literature are used to develop appropriate curriculum designs and delineate

the expected competencies. (Otunga et al, 2011). This section therefore presents related literature reviewed on curriculum in other contexts, other than the policy document or other researches done in the curriculum.

2.6.1 Societal needs

For a curriculum to be relevant, it must meet societal needs. Education is recognized as a key means to ends of greater economic and social equality, eradicating poverty and of national, economic, social and political development (IBE, 2015). This paper further argues that when education in a country lacks relevance and quality, it creates a shortage of human resource with appropriate mix of skills. This constrains holistic and inclusive development, sustainable growth and global competitiveness. It further perpetuates social inequalities and exclusion, leading to “social and political instability”, hence is a threat to peace and security of any society (ibid).

The curriculum is critically important in any society as it engages in a collective way the knowledge, skills and values that need to be learnt by all. As a tool for giving effect to SDG 4, which seeks to *ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*, the curriculum is well positioned to achieve this goal. It is the kind of curriculum in place that determines whether education is inclusive, and therefore equitable. In the way it is structured, the curriculum determines the quality of learning and the competencies required for lifelong learning and holistic development (IBE-UNESCO, 2015)

Lovat and Smith (1995) argue that there is always an underlying social and politico-economic philosophy which impacts upon education and the curriculum. Brady and Kennedy, (1999) extend this argument by maintaining that curriculum is not an entity apart from society, it is firmly embedded in it and thus is a social construct. But it is also a personal construct, as curriculum represents a selection of societal ideas, skills, values and practices. Thus, the curriculum is constructed by people, for people and as such should be relevant and all encompassing so as to address all the needs of the society. National development is multifaceted and goes beyond economic and material progress knowledge technology; equity and social justice are elements of national development.

The rapid development and proliferation of ICT and of related digital technologies are driven towards a knowledge economy; it demands often higher levels of education in workers across all sectors. Since personal development is one of the education goals, there should be links between education and the individual. Access to education is pivotal to life's chances and self-fulfillment (Musuota, 1994). Additionally, Brown (2003) argues that to enable a society to progress, education must be widely available to individuals.

Education is much more than a mechanical process, as it deals with human lives, destinations, hopes and dreams (Disla, 2002). Thus careful thought needs to go into the selection of curriculum content. The needs of the society must be taken into consideration. The societal needs include the preservation of culture, industrial and economic needs, creativity needs, as well as moral and ethical needs. Some of the countries that Kenya has benchmarked with in education are South Korea and Malaysia. In these countries, teaching of moral education is taken seriously among the core subjects right from pre-school through all the levels of education. These countries also emphasize on the promotion of nationalism and patriotism through teaching of history of the country in South Korea and Local studies in Malaysia (KIE, Bench Marking Report, 2010).

The Kenya Education Commission of 1964 (The Ominde Commission) was formed to introduce changes that would reflect the nation's sovereignty. The commission focused on patriotism, identity and unity, which were critical issues at the time. The committee also laid emphasis on an education that would foster social equality, preserve Kenya's cultural heritage and reduce poverty. Consequently, the content of History and Geography subjects were changed to reflect national cohesion. One of the recommendations was that Kenya adopts a unified national curriculum approach. This committee also laid emphasis on an education that was to promote unity and patriotism.

Although the curriculum should be seen as a vital element for improving education, quality and relevance of education to holistic, inclusive and sustainable development goals, it is a key means for improving quality and equity in education this effective learning and ensuring consistent alignment of learning with social aspiration and development goals.

2.6.2 Competencies

Competency based education identifies specific competencies and skills that must be mastered by a pupil and are regularly measured against set standards so as to assess the effectiveness of the teaching (Farrant, 2004). All competencies should be both demonstrable and amenable to evaluation (Ross, 2000). Competency based training emphasizes on outcomes and skills rather than processes of learning and the time taken to reach a prescribed standard of competency (Evan, Haughey & Murphy, 2008). It emphasizes what the learners should know and be able to do. Rather than education being focused on what the teacher thinks learners should know (teacher-focused) it looks at learning from the point of view of the learner performance (learner-focused) making as clear as possible what should be achieved and standards for measuring that achievement (Republic of Kenya, 2011).

The competence based curriculum shifts away from the idea of knowledge, to one of skills and abilities where emphasis is put on standards of achievements. In a competency based curriculum, knowledge is closely linked with understanding rather than being identified in its own right. The shift to competency based approach to curriculum and learning is an integrated and holistic understanding of what it is that we want our young people to learn, be able to do and to become.

Global trends in curriculum designs are moving towards competence based approaches. Different countries have different ways of developing competencies in their curriculum. In South Korea and Malaysia, curriculum designs are a blend of both objectives and competencies based approaches. The designs are both thematic and these themes are packaged in modular forms and cut across all subjects. In the European Union (EU) countries, competencies are a combination of knowledge, skills and attitudes appropriate to the context. For them 'key competences are those which all individuals need for personal fulfillment and development, active citizenship, social inclusion and employment' (European parliament, 2006: in IBE 10). Further it set out 8 key competences for lifelong learning namely: mother tongue, foreign language mathematical sciences and technology, digital competence, learning to learn, social and civic initiative and entrepreneurship, cultural awareness and expression.

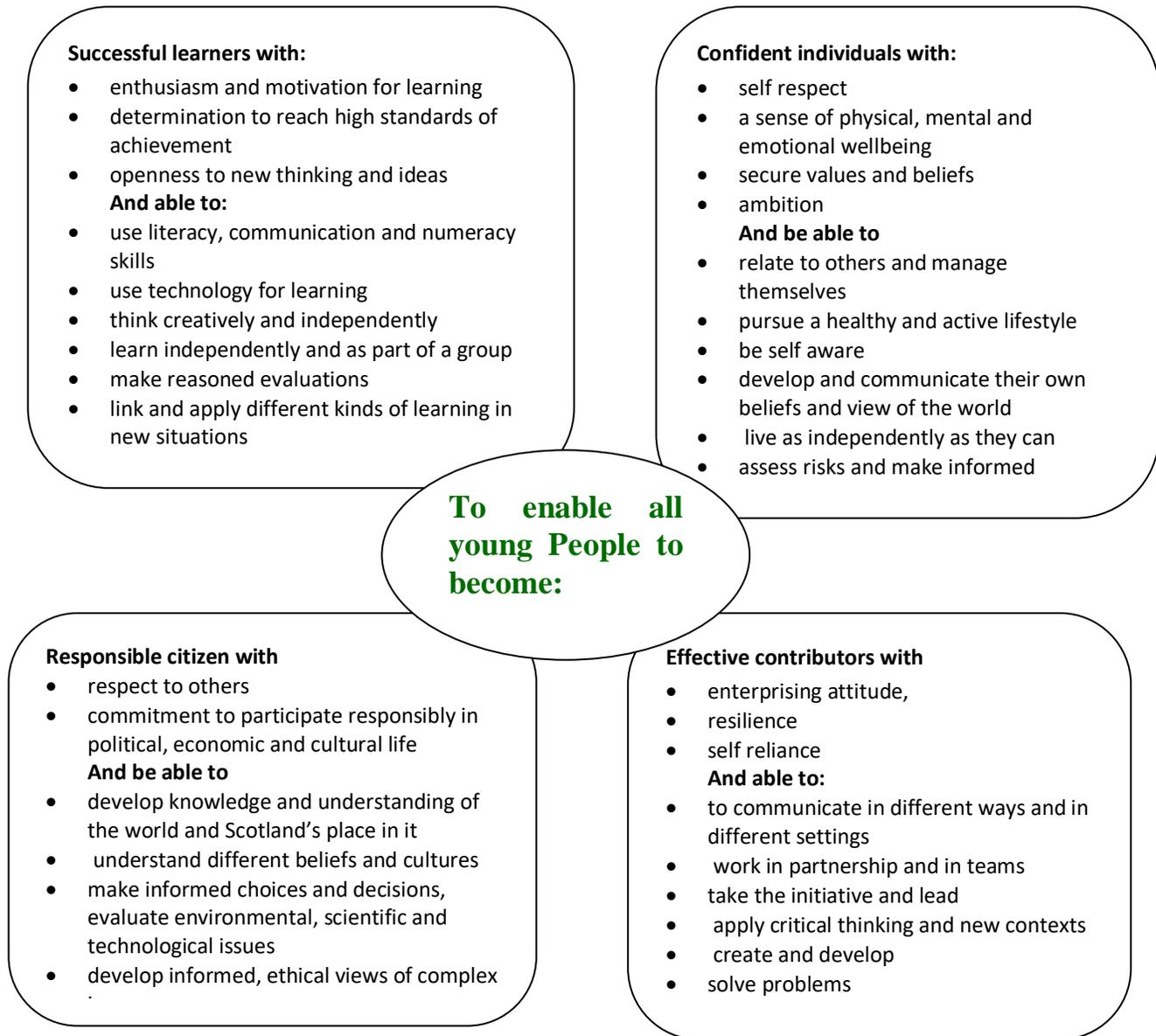
According to Scottish Government (2009), all children and young people are entitled to opportunities for developing skills for learning, life and work. The skills are relevant from the

early year's right through to the senior phase of learning and beyond. Curriculum for Excellence is designed to transform education in Scotland, leading to better outcomes for all children and young people. It does this by providing them with the knowledge, skills and attributes they need to thrive in a modern society and economy laying the foundation for the development of skills throughout an individual's life. Providing individuals with skills helps each individual to fulfill their social and intellectual potential. This is expected to be beneficial to the wider Scottish economy. The skills should be developed across all curriculum areas, in interdisciplinary studies and in all the contexts and settings where young people are learning. Scotland focuses on a number of overlapping clusters of skills:

- Personal and learning skills that enable individuals to become effective lifelong learners
- Literacy and numeracy
- The five core and essential skills of communication, numeracy, problem solving, information technology and working with others
- Vocational skills that is specific to a particular occupation or sector

The development of skills in Scotland is essential to learning and education to help young people to become successful learners, confident individuals, responsible citizens and effective contributors. The skills and attributes which learners develop should provide them with a sound basis for their development as lifelong learners in their adult, social and working lives, enabling them to reach their full potential. Every child and young person is entitled to support to enable them to gain as much as possible from the opportunities to develop their skills which Curriculum for Excellence can provide. Timely provision of support to meet individuals' needs will enable children and young people to effectively engage with opportunities for skills development.

Figure 2.2: Developmental Skills for Learning



Source; Scottish government (2009)

2.6.3. Global views on values and attitudes in education

The values included in the Australian curriculum include: cooperation, freedom, happiness, honesty, tolerance, unity, peace, respect, responsibility, simplicity, humility and love. In Singapore, the concept of a national ideology had an objective of preserving their Asian identity in an era of globalization where they would be exposed to external influences. They outlined the essential tasks in developing the National Ideology, namely: to find common values which all

can share; to preserve the heritage of the different communities; and to ensure that each community also appreciates and is sensitive to the traditions of others.

The Singaporean education had a basis for developing values that were mainstreamed into the curriculum. This promoted Singapore identity with key common values that all racial groups and faiths would subscribe to and live by. Outside of these Shared Values, each community would practice its own values as long as they are not in conflict with the recognized values inculcated through the curriculum.

America has also implemented values and character education especially in the state of Georgia. Values are considered to be important to a child's character formation. This fact is particularly appropriate in the preschools and early school years. As students' progress through schools, it is important that their education provide instructional opportunities, which help them develop their beliefs about what is right and good. The State Board of Education believes that there is a core list of values and character education concepts that should be taught in their schools such as these;

Table 2.1: Character Curriculum

| | | |
|---|--|---|
| <ul style="list-style-type: none"> • <u>accomplishment</u> • <u>cheerfulness</u> • <u>citizenship</u> • <u>cleanliness</u> • <u>commitment</u> • <u>compassion</u> • <u>cooperation</u> • <u>courage</u> • <u>courtesy</u> • <u>creativity</u> • <u>democracy</u> • <u>dependability</u> • <u>diligence</u> • <u>equality</u> | <ul style="list-style-type: none"> • <u>fairness</u> • <u>frugality</u> • <u>generosity</u> • <u>honesty</u> • <u>honor</u> • <u>kindness</u> • <u>knowledge</u> • <u>loyalty</u> • <u>moderation</u> • <u>patience</u> • <u>patriotism</u> • <u>perseverance</u> • <u>productivity</u> • <u>punctuality</u> | <ul style="list-style-type: none"> • <u>respect for authority</u> • <u>respect for others</u> • <u>respect for the Creator</u> • <u>respect for environment</u> • <u>respect for health</u> • <u>school pride</u> • <u>self-control</u> • <u>self-respect</u> • <u>sportsmanship</u> • <u>trustworthiness</u> • <u>truthfulness</u> • <u>tolerance</u> • <u>virtue</u> |
|---|--|---|

In the Kenyan context, the guiding principles have been developed from the *Values Education Study (2003)*. They recognize that in *all* contexts schools promote, foster and transmit values to all students and that education is as much about building character as it is about equipping students with specific skills. They also recognize that schools are not value-free or value-neutral zones of social and educational engagement. Although the curriculum in Kenya has addressed values like nationalism, patriotism, integrity and mutual respect, through integration and mainstreaming and education is structured to promote positive attitudes towards good health and environmental protection (KIE, 2006), much more needs to be done to inculcate this in learners and not teach for achievement of a mean score only.

The three countries in the East African region have developed a competence based curriculum. In Rwanda, the process began in 2014, and currently (2016), they are implementing it in phases starting in the early grade learning as well as Form One (Republic of Rwanda, 2015). Just like Kenya, Rwanda is building a knowledge based economy driven by science and technology. Its curriculum framework translates the country's education vision into learning experiences and assessment. In view of the East African harmonized Curriculum Framework, it is imperative that Kenya as a partner state adopts the agreement made among the partners in the East African Protocol and revert to a competence based curriculum.

Principles guiding the competence based curriculum framework in Rwanda include; learner centered approaches, teaching and learning that emphasizes on competencies rather than knowledge domain, flexible inclusive learning that has emphasis on talents, integration of ICT and interconnectedness with cross cutting Issues such as sexuality, genocide studies, financial literacy, and peace and values education among others (Republic of Rwanda, 2015).

Identifying specific basic competencies such as literacy and numeracy, and generic competencies such as critical thinking, creativity and innovation, among others, depends on specific contexts. When Kenya adopts the competence based curriculum, there will be need to establish both basic and generic competencies depending on the views sought from the stakeholders.

2.6.4. Learning areas

The curriculum in Kenya in the last century has been designed around the philosophy of subject matter content. The main tenets of this subject matter philosophy underlie 19th Century doctrines of classical psychology. According to the doctrines, the mind is compartmentalized into specific faculties which can be trained to accomplish a given task. The end task is passing examinations which are taken after drills and learning through rote memorization. The learning environment is characterized by competition and detailed mastery of facts of the subject matter.

Subjects in the curriculum vary from one country to the other. For instance the education system in Japan runs from grade 1 to grade 16. Education is compulsory during the elementary and middle level schools which comprises of the first 9 years of the education system. Transition rate from middle to high school is at 98% (MOFA Japan, 2014). The graduation to high school and the university is based on examination performance. The middle and high school curriculum is offered in single institutions for continuity purposes.

The Australian system of basic education comprises of foundational curriculum in the first two stages. The compulsory subjects in stage three are mathematics, English, science and foreign language. The parent may choose to allow or deny their learners the opportunity to study religious studies and sex education since they are not part of the national curriculum.

South African curriculum offers a broad range of subjects in the basic education system. The subject choices differ from school to school but every learner must study English language out of the 11 languages offered in the school curriculum (Exchange, 2012). The languages offered in the curriculum are based on the eleven national (formal) languages allowed in South Africa.

In Ghana, children join education system at age 6 years (for grade 1 to 6). The stage transits to junior secondary school which comprises grade 7 to 9 and whose admission is open to any learner who completes grade 6 without the requirement of an examination. Junior secondary schools are therefore in the same compound with the primary schools. Senior secondary consist of 3 years starting from grade 10 to 12. The subjects did at this level include a set of core subjects and a number of clusters of elective subjects (Keteku, 2008).

South Korea has a national basic common basic curriculum with electives. For early grade learners, concentration is on mother tongue, Mathematics, Disciplined Life, Intelligent Life,

Pleasant Life and 'We Are the First Graders'. The emphasis here is on discovering oneself and transition from home to school.

Similarly, Malaysia has a national common curriculum for primary level. Although Primary curriculum has 14 subjects, only four are compulsory, which is Local Studies, Physical Education, Citizenship and Moral education. The rest are either additional or optional. These subjects include foreign languages for primary school level. It is clear that subjects in primary schools in these countries are very distinct, unlike in Kenya where some subjects are integrated, for example creative arts representing Music Art and Craft. These distinctions facilitate development of talents in these areas. This gets hindered by subjects' combination.

Often in many countries, the curriculum is too overloaded, overcrowded, "congested" and outdated. In some cases, there has been reduction of the basics curriculum to a very small number that people can focus on. The International Commission on Education for the Twenty-First Century, proposed to UNESCO an integrated vision of education based on the four pillars of "learning to know, to do, to be, and to live together." Some advocate for the "4Cs (Critical thinking, communication, collaboration and creativity) or the 7Cs (the 4Cs plus "computer, character and culture". Some speak of becoming "good capable and world-improving people". Others would say it is having people becoming "effective thinkers, effective actors, effective relators and effective accomplishes" (UNESCO, 2012). The aspect of the 21st Century skills is one which the curriculum cannot ignore in the development of its curriculum framework.

UNESCO (2000) regards 'learning to do' or to 'act creatively' as the second of its four pillars of education needed to support society in the 21st Century. Amadio, Operti and Tedesco (2014) regarded curriculum in a wide context of having the most important values being acquired at school and the most fundamental learning experiences required to ensure new generations are prepared for life in the aspired society. Additionally, Brown (2003) opines that edifying young people through fostering imagination and creativity, and a prime tool for doing this may be an arts education that includes Art and Music. Jensen (1998) observed that a strong Arts curriculum is at the creative core of academic excellence and lays the foundations for positive, measurable and lasting academic and social benefits through building creativity, concentration, problem solving abilities and self-discipline. In China, it is now creative students who are labeled as

“good students” rather than students who gain high scores through the traditional rote learning. By learning and practicing art, the human brain actually rewires itself to make more and stronger connections (ibid). Music, on the other hand, is a tool that primes the brain’s neural pathways, enhances a wide range of academic and social skills. Creative Arts and other creative practical subjects such as Home Economics and Industrial Arts therefore need to be in the curriculum.

According to studies done by UNESCO, the early grades learning in recent past had to do with “learning to play and live with others”. The primary school supplements the skills learnt at ECD with an addition of the 3 Rs (reading, writing and arithmetic). Kenya Vision 2030 urge for more infusion of content on Science, Technology, and Innovation (STI) into the primary curriculum to develop prerequisite skills in the learners for further training in STI. Further, the primary education curriculum should mainstream technological innovation and entrepreneurial skills in order to realign the Kenyan curriculum to the dictates and aspirations of Kenya Vision 2030 (KIE, 2010; GoK, 2007).

In addition to what is covered in primary school, secondary complemented this with the addition of Mathematics, languages, sciences and humanities. However, additions that are incorporated in order to seek relevance and add skills with the future in mind have widened the scope of content in the school curriculum. It congests the curriculum making it overloaded or overcrowded. The year 2002 saw a national revision and rationalization of the curriculum after a need assessment was carried out (KIE, 1999) and the recommendations from various education commissions. Among the issues that were addressed included overloads and overlaps, revision of objectives to ensure that they were achievable and ensuring that emerging issues were well articulated in the curriculum.

2.6.5. Assessment

There are new trends in assessment the world over as governments endeavor to reform education in order to meet their needs. These trends cover both alternative and authentic assessment. Alternative assessments focus on the active construction of meaning rather than the passive regurgitation of isolated facts. These place more emphasis on thinking skills, collaborative skills and provide opportunities for multiple correct answers. Authentic assessment on the other hand,

focuses on knowledge, thinking and skills. It aims at solving problems and accomplishing tasks. These give a teacher a clearer picture of what the learners are able to do with the knowledge acquired over a long period of time. Tests in this area are prepared with the success of the learners in mind as opposed to the success of a few as in the case with norm referenced assessment.

Countries have continually benchmarked with the best in the field of education in order to improve performance. The Japanese Government resolved to reform their education in order to catch up with the west through continued and aggressive research. Singapore has the best education indicators in the world in Mathematics and Science as measured in the Trends in International Mathematics and Science Survey (TIMSS). The Kenya Vision 2030 takes cognizance of the achievements of a number of countries in education as well in the economic indicators and makes mention of the rapid progress over a short time of South Korea, Malaysia, Finland, Ireland, China and Chile. PISA studies carried out in America and Europe have continued to inform policy on education and consequently testing.

Although the quality of education of Kenyan schools appears to be better than most of the Sub-Saharan Africa; there is need to balance between quality and quantity, since this affects assessment modes. The results from the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) III survey in 2010 reveal that Kenyan learners, in standard six generally perform well in both reading and mathematics tests compared to their counterparts in 15 countries in Sub-Saharan Africa. For instance, Kenya is ranked 4th after Seychelles, Mauritius and South Africa on standard 6 pupil's reading competency level 8 and second after Mauritius on standard six pupils' mathematics competency level 8.

Educational psychologist Benjamin Bloom categorized what and how we learn in three domains namely cognitive, psychomotor and affective. Although the curriculum in Kenya underscores the need for holistic development of the learners as suggested by Bloom's approach, the KIE (2010) indicated that learning in Kenya mainly focuses on the cognitive domain or the aspect knowledge only. Attitudes a central component of competencies are never assessed. The emphasis has been on certification at the expense of learning. This often only fulfils a function of selection and as a

regulation of opportunities for those who move ahead in the education system (UNESCO, 2015). It becomes an indicator of the institution one moves to in the next level of learning and the career path that is pursued.

Although the MOE in Kenya lays a lot of emphasis on school based continuous assessment, there is a lot of pressure on curriculum implementers to perform highly in national examinations. This results to teachers' focusing on revision and drills for exams thus compromising the learning process.

Unlike Kenya, South Korea and Malaysia puts a lot of emphasis on school based assessment. In South Korea for example, there are no National assessments, though selected sample schools are assessed at grade 3 and Form 1 to ensure standards of teaching and learning are maintained (KICE, 2008). This means that transition from one level to another in basic education is seamless. Although the Malaysian education system has national examinations at the end of every level, the results, unlike Kenya, do not determine transition to the next level. At the end of Level 4, the assessment determines the career path of learners (MOE, 2001).

The summative assessment at the end of both the primary school level cuts off learners from proceeding to the next level of education. The competitiveness of the examinations leads to a situation where the focus of assessment is shifted from informing learning and improvement in performance. This is also cited in Sessional Paper No 2 of 2015 on Reforming Education and Training Sector in Kenya and underscores the importance of developing the whole person and emphasizes the need for a balanced curriculum.

According to Kellagan and Greaney (2001) regular, reliable and timely assessment is key to improving learning achievement and should therefore be a fundamental component of an effective teaching and learning process.

In an established competence based curriculum framework, the purpose of evaluation is spelt out and goes beyond selection and certification. Since there is emphasis on the formative aspect of assessment, the purpose includes monitoring progress and providing feedback. In the case of

Rwanda, assessment focuses both on knowledge and understanding, aptitude and practical tests, attitudes and values (behavior) and generic competencies guided by specific indicators (Republic of Rwanda, 2015).

Assessment of competencies is criterion referenced, as compared to assessment of an objective based curriculum. Huitt, (1996) in his article ‘Measurement and Evaluation’ differentiates between criterion and norm referenced assessment based on purpose, content, item characteristics and score interpretations. Whereas criterion referenced assessment focuses on determining whether each learner has achieved specific skills or concepts, norm referenced assessment focuses on ranking learners with respect to the achievement of others in broad areas of knowledge.

2.6.6. Pedagogy

For teaching to be effective it has to be systematic and stimulating. Teachers need to acquire skills as they teach in order to make it motivating. Perrot (1984) in Otunga, et al (2011) identifies several factors such as set induction, stimulus variation, explanation, questioning and reinforcement as presentation skills of interaction. Others are use of examples, question and answers and explanations. Instructional approaches also are discussed as simulation, presentation, discussion and problem solving.

2.6.7 Resources

According to Otunga, et al (2011), there are two types of instructional resources; human and non-human resources. The human resource includes the teacher or any other person interacting with the learners, while the non-human is either print or non-print resources. Print resources include course books, reference and supplementary materials as well as class readers, journals, newspapers, workbooks, fiction, periodicals, study guides, magazines among many others. Further Schonwetter (2008, in Otunga, et al, 2011) has given other forms of resources that exist. These include, but not limited to multi-media presentations, teaching websites and repositories, government sites, conference sites, trade sites and teaching and learning objects. Generally it is the teacher who decides on the resource to be used to enhance teaching and learning alongside the teaching method to compliment delivery of content and achievement of objectives. All this

will depend on content and purpose of instruction, language level and class size, resource availability and adequacy (ibid).

2.7 Review of Relevant Previous Research

2.7.0 General overview

Educational changes at the national level at the initiation or implementation stages must plan and consider how people will react to change. There is need to consider how the process will be affected by the existing circumstances. Sekui, (2004, in Wedell, 2009) observed that in Japan, an educational change that involved new curriculum made teachers worry because of the required new practices in classroom management styles and secondly the implementers may lack confidence on the new styles they are expected to adopt. There is therefore need for comprehensive rationale for the anticipated curriculum reforms. This section presents review of relevant previous curriculum research that relates to the themes of this study.

2.7.1 Societal needs

In responding to the needs of the different dimensions of society, the curriculum should exemplify the integrated conception of education as a cultural, social and economic policy (Marope 2014). It is further pointed out that society's expectations and demands are the foundations for study programmes and disciplines which are constructed for future generations (Moore, 2014). The sentiments advanced clearly show that education is an integral part of the society, and the needs that arise from time to time.

Various studies have indicated existence of gaps in the curriculum as pertains to the societal needs. The Bessey Committee of 1972 pointed out that the curriculum did not achieve the national objectives because of the narrowness of scope and over emphasis on rote learning (Republic of Kenya, 1972). The study established that the curricula neglected practical and creative activities especially in agriculture and basic manual skills. The curriculum was also found to be unresponsive to Kenya's cultural heritage and the entire environment in which children as well as young people grew. By 1977 in Kenya, secondary school graduates surpassed the white collar jobs that were available aggravating the problem of unemployment in the country. The Report of the National Committee on Educational Objectives and Policies

(Gachathi report of 1976) guided curriculum improvement during this period. The Gachathi Report (Republic of Kenya, 1976) raised the issue of unemployment in relation to 7-4-2-3 education system. In view of this, the committee proposed that the secondary school education curriculum should be redefined to make it practical with more emphasis placed on the teaching of sciences, agriculture and vocational subjects. The 7-4-2-3 system of education lacked the capacity and flexibility to respond to the changing aspirations of individual Kenyans and the labour market needs. Consequently, there was an urgent need to change the curriculum to focus on the acquisition of relevant and practical knowledge and skills that would lead to quality employment. The rationale was that the existing system was too short and not rigorous enough to give graduates enough practical education to fit in the world of work.

The year 2002 saw a national revision and rationalization of the curriculum. The revision entailed refocusing the goals of education, the level objectives, subject general objectives and the specific objectives. The findings of the Summative Evaluation (KIE,2010) for the primary level stated that literacy, numeracy and communication skills had been achieved to a large extent but there were gaps in the achievement of objectives on appreciation of values and the use of leisure time; the curriculum content addressed nationalism, patriotism and national unity but social context impeded the embracing of these values; the implementation of the primary education curriculum content laid little emphasis on inculcation of practical skills necessary for economic development; the primary school education did not adequately equip the learners with the competencies to meet the demands of a knowledge based economy as per aspirations of Vision 2030 (KIE, 2010).

The summative evaluation of the secondary school curriculum made it apparent that the revised curriculum had gaps that needed to be addressed if education was to have the desired impact on the socio-economic and technological development of the country and specifically achievement contemporary needs of the of Vision 2030. The key recommendation was re-alignment of the curriculum to meet the societal needs and viewing the curriculum as an outcome of a process reflecting a political and societal agreement about the what, why and how of education for the desired society of the future.

2.7.2 Competencies

Ford (2014) opines that Competence Based Education (CBE) and training is not a new concept. Ford traces development of CBE to the theory of behaviorism whose proponent is the psychologist Skinner, because it reflects instructional designs informed by the field of Psychology, and measuring what learners are able to 'do' and at what level (standards- based performance). The emphasis is outcomes versus process.

Until recently, CBE programmes were a 'niche', for adult learning and vocational education aimed at the job market. Calls for more effective and demonstratable outcomes have attracted interests in development of major competence based initiatives (Ford, 2014). In CBE, students are assisted and not taught. It draws what the competence is, how it will be achieved, the activities and content, and how it will be assessed. Ewell (2013) in Ford (2014) refers to it as curriculum mapping. It clearly establishes and communicates the linkages between learning, assessments and specific competences.

A study carried out in Korea by IBE-UNESCO(2012),revealed that a CBE is not in conflict with the curriculum in existence then, and that specific subjects continued to provide a critical path in promoting acquisition of key competencies such as communication and efficient management. The study further shows that competency skills recommended for Elementary level were; problem-solving skills, communication skills and cooperation skills. A survey conducted in Ghana by COTVET (2009), it was affirmed that Competency Based Training is an industry and demand driven education and training programme, its products have a high demand on the job market.

Rychen and Salganik (2001) carried out a study which revealed that a creative person should have divergent thinking, problem solving skills, originality, and ability to see or create new values. Considering the convergence on the need to nurture creativity in the curriculum and the literature encountered, constructs of problem solving, divergent thinking, research and innovation will find their place in the content of the proposed curriculum.

Since the needs of the learners and how they can use knowledge, values and attitudes are the focus of a competency based curriculum, UNESCO-IBE (2015), the primary school curriculum should have a prime interest in developing various competencies within individuals. It should realistically make room for learning to embody the opportunities to “know,” “show” and “do.” It is through such engagements that learners are fashioned in their competencies, social behaviour and other aptitudes as required, but not limited to their environments (Nanzhao, 2000).

The realization of these competencies also means that teachers who are the implementers are re-oriented and re-trained on how to handle competencies in the curriculum. In analyzing pre-service teaching education in sub-Saharan African countries where learning outcomes are low and unequal, (Akyeampong et al., 2013) observes that the teacher training curricula in Ghana, Kenya, Malai, Senegal, Uganda and Tanzania, place little emphasis on quality and variety of teaching methods. He goes on to state that trainees are not prepared to ensure that learners participate actively to understand the lesson. This goes against a competence curriculum in which learner participation is at the core of learning.

2.7.3 Learning areas

A study carried out by KICD (2014) found out that ECD and lower primary curriculum is expected to equip learners with language, arithmetic and reading skills. According to the study, ECD and lower primary levels act as a springboard for the upper levels. A study by Herman (2011) who investigated the role of vocational oriented education with that of national educational institutions in 18 countries and found that the students who come from vocational stream acquire the skills better than the others who do not have the vocational orientation. The vocational streams of students have better chances to get employment as well as higher salary because of the skill set they possess.

The teaching and learning of Mathematics, Sciences and Languages is important to the assimilation and acquisition of the 21st century skills. Since, the country’s Blue- print for economic development flags the teaching of Mathematics, Languages and Sciences as being vital to the country’s development. Studies have also shown that countries like Singapore and Malaysia with high technological development have put great emphasis on

mathematics and sciences as a foundational requirement for their technological advancement (Government of Malaysia, 2012). Similar studies carried out in Singapore indicate the emphasis on the 21st Century skills, which include creative and critical thinking, communication and collaboration, and social and cultural skills. These are core values that the Singapore education system sets to cultivate in all its students (Soland et al. (2013) and Voogt and Roblin (2012) pointed out that in Japan, as in Singapore, the competencies and pedagogical moves associated with 21st Century competencies are seen as a central means of using education to ensure sustained economic prosperity in the years to come. These 21st Century aspirations have been articulated in a New Growth Strategy (2010) announced by the Japanese government as well as in “The Future Vision on Career Education and Vocational Education at School,” by the Ministry of Education, Culture, Sports, Science and Technology (2011). Further, the 21st century competencies in the Japanese classrooms were not dissimilar from Singapore: problem solving, communication, collaboration and use of Information Communications Technologies (ICT).

In spite of the proposed considerations and justification for the choice of content, Tawil (2012) discounts the idea of looking at education from a purely utilitarian or instrumental approach, that leans towards the gains at the individual or national level. He advocates for the humanistic dimension to be emphasized to ensure a renewed purpose for education. Attention should be given to sustainable human and social development.

2.7.4. Resources

Efforts made to provide resources through the Free Primary Education (FPE) program have had a positive impact on the availability of resources in primary schools. Although studies (KIE, 1999) indicate that teaching and learning materials such as textbooks and other reference materials are available, concerns were raised about the quality of the recommended materials.

As Ngware, Wamukuru and Odebero (2006) observe, quality and adequacy of resources such as physical facilities have a direct bearing on quality as they determine how effectively the curriculum is implemented. These scholars have argued that quality education cannot be achieved and sustained if the resources and facilities are not available in sufficient quality and

quantity. Apart from textbooks, AHPRC (2010) have observed that teaching aids significantly contribute to learner achievement. Developing and using appropriate teaching resources have been proven to improve learners' achievement. It requires teachers who are creative, proactive and who appreciate the power of resources in enhancing performance.

According to Twoli, Maundu, Muindi, Kiio, and Kithinji (2007), Oluoch, (1990) and Beswick, (1975), the expanding scope of knowledge in many areas of education, necessitates the teacher to be aware of the diverse types of teaching resources available for use, as well as those that can be prepared using locally available materials. Twoli et al., (2007), recommend that the teacher should carefully prepare a wide spectrum of learning materials, and effectively use them during the teaching-learning process. Apart from teachers, field officers and head teachers have a part to play in helping teachers to use teaching and learning resources. In a study on educational resources, KICD (2014) indicated the need to sensitize head teachers and education field officers on the key role that teaching and learning resources play in the teaching learning process. The sensitization helps the school administration to encourage and support teachers in their quest to develop teaching and learning resources.

Despite this important role, there have been challenges in education related to insufficient numbers of trained teachers, over-stretched infra-structure and instructional materials (UNESCO, 2014). This focus on resources where priority goes to funding of text-books, teaching materials and equipment is however criticized by Tedesco (1997).He proposes a more integral view of education that seeks synergies between input, processes and outcomes.

The popular procedure for the distribution of the capitation, grant in Kenya has been according to the number of children enrolled. In the views of Watkins and Alemayehu (2012) this procedure disadvantages 12 counties in the arid and semi-arid areas that are home to 46% of the out of school population.

2.7.5 Pedagogy

The instructional strategies adopted by teachers determine what will be learnt by the learners. An assertion made by AHPRC (2010) in classroom observation study for mathematics implies that pedagogical content knowledge was a major factor that influences how much content is learnt.

Additionally, Osakwe (2009) in the AHPRC study (ibid) identify some variables for quality classroom instruction that include attitude of the teacher, knowledge base, mastery of subject and social cultural context. Effective communication by the teacher enables this context to be well utilized to facilitate learning. Individual attention to learners is therefore important too in enhancing learning. Darling –Hammond (1990) opines that policies on teaching affect the teachers directly and hence if pedagogy has to change as a matter of policy, the policy too has to pay attention to the knowledge base of the teachers. Wanzere (2002) suggests that there is need to enhance the competence of the Kenyan teachers in the light of rapid, intensive and fundamental nature of present day technological, economic, cultural, societal and political changes.

Effective instruction which promotes what can be done with knowledge is more allied to active participation Morin (2011). This is contrasted to passive participation which emphasizes transmission and accumulation of knowledge (as during a lecture). Acedo and Operti (2012) note that the promotion of relevant pedagogies that promote 21st Century skills has been propelled by the wide range of learning conditions as well as the singular nature of each pupil as a special being.

2.7.6 Talents

The National Youth Situation Analysis Report of 2009 indicates that majority of Kenya's population comprises of youth aged between 15 - 29 years. The report further noted that the youth have talents but have no opportunities to exploit or market them. The report recommended the need for resource centres where the youth could spend time to gain useful skills and develop their talents such as sports, music and art. In response to this challenge the Kenya Government through the Ministry of Youth Affairs and Sports established a pilot National Youth Talent Academy in March 2010 to provide the youth with an opportunity to identify and nurture their talents.

Every society has its specially gifted persons who need to be given opportunities to develop and exploit them to their full potential. These people need to be identified early in life so that their talents can be nurtured for the benefit of themselves and the society (Kinyua, 2014).

There is no one universal definition of gifted and talented learners. In the United States of America, The No Child Left Behind Act (Elementary and Secondary Education Act, 2002) define gifted and talented as children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities.

In Australia, gifted and talented learners at school are defined as those who demonstrate or show the potential for a high level of performance in different ability areas, when compared to others of similar age, background and experience such as intellectual; Creative; artistic; social; physical; spiritual (Department for Education and Children's Services, 1994).

In Korea, Article 2 of the education Act defines a gifted person as one who possesses extraordinary innate abilities or visible talents requiring special education to nurture them'. The Act gives the purpose of gifted education as: 'to promote self-actualization of individuals and have them contribute to development of society and nation by scouting for gifted and talented persons and carrying out education suitable for ability and aptitude in accordance with regulations so they can develop innate potential.

Another definition according to Gagne (2004), states that giftedness is outstanding potential while talent is outstanding performance. Gifted children may or may not be high achievers. The talented children are marked by outstanding mastery in knowledge and skills in one or more areas. These areas include but are not limited to Mathematics and Science which fall under academic disciplines, sports and visual arts which can be categorized under physical, technical or artistic ability, a category of problem solving ability and creativity and finally, communicative and leadership ability (Gagne, 2004).

In addition, the gifted education is aimed at helping gifted and talented persons to acquire expertise, creativity, leadership, morality and self-directed learning attitude in accordance with other legislative provisions which say that all members of a nation shall have right to education according to ability and aptitude to promote self-actualization and contribute to development of society and nation.’

The Gifted Education Programme was first implemented in Singapore in 1984 amid some public concern. It was initiated by the Ministry of Education (MOE) in line with its policy under the New Education System to allow each student to learn at his/her own pace. The MOE had a commitment to ensure that the potential of each pupil is recognized, nurtured and developed. It was recognized that there are pupils who are intellectually gifted and that there should be provisions to meet their needs.

In Kenya, Koech (1999), Kochung’, (2003) and Kang’ethe, (2004) defined gifted and talented children as those who at any educational level are identified as possessing demonstrated or potential abilities that give evidence of high performance capabilities in areas such as general intellectual ability, specific academic aptitude, creative and productive thinking, leadership ability, visual and performing arts and psychomotor abilities, while Kinyua (2014) define gifted and talented children as those with outstanding talents, who perform or show the potential of performing at remarkably high levels of accomplishment when compared with others of their age, experience or environment.

The Presidential Working Party on Education and Training for the Next Decade and Beyond (Kamunge Report, 1988) noted that every society, Kenya included, has its specially gifted children who need special education to develop their special intellectual, creative, artistic or other talents to the maximum level possible. Accordingly, the committee recommended that such children be identified early and special programmes developed to enable them to realize their full potential in order to enable them to contribute to the society. Special educational programmes for such children should be developed in the interest of national development. The committee proposed the establishment of “Centres of Excellence” as pacemakers for advanced knowledge and technology in order to meet the needs of the society.

According to Kang'ethe and Mugo (2010), from 1964-2005 several gaps existed which showed inconsistency in the implementation of educational policies and programmes. They also noted that children who are Gifted and Talented are not mentioned in most of the Education Policy documents in Kenya. According to them there has been no clear commitment and political strategy targeting gifted and talented persons. During the National Conference on Gifted and Talented Young Persons in Kenya (2010) it was noted that Kenyatta University and Kenya Institute of Special Education (KISE) train teachers for learners who are gifted and talented yet there are no programmes for learners who are gifted and talented in Kenya.

2.7.6.1 Identification methods of learners who are Gifted and talented

No single method of identification is appropriate for all types of gifted students. Multiple criteria should be used which should include gathering as much information about the learners as possible. Teachers are required to identify learners who are gifted in the whole process of learning. The identification process should be continuous. Schools should also evaluate their systems to ensure that they accommodate learners who are gifted and talented. Progress of the identified learners should be monitored to ensure that, the programme is meeting their educational needs (Kinyua, 2010).

The five key principles of identification according to Richert (1991) are: Defensibility-: procedures should be devised to identify learners in all domains of giftedness and fields of talent; Advocacy-: teachers should use assessments to promote learners' interests and should not expect learners to perform equally well on all measures ; Equity-: there should be equitable procedures for identifying groups who may be disadvantaged by the mainstream identification procedures; Comprehensiveness-: there should be the appropriate use of multiple sources of data; and Pragmatism-: identification needs to be consistent with the level of resources available (Richert, 1991). Unfortunately without a common definition or understanding of learners who are gifted and talented, it becomes difficult to design their education and what it should entail and even methods of nurturing the talents.

2.7.7 Assessment

An analysis of the assessment system in Kenya reveal that the high stake end of cycle assessment, namely KCPE/KCSE which asses over 1.3M children annually compromise the role of formative assessment (Mugo & Asiago, 2015). Despite being national examinations, they do not improve learning as they act as sieves to determine certification and movement to higher levels. This encourages basic learning at the expense of deep and underlying issues in the content or the learning areas which produces extended analysis and application of the acquired knowledge.

The current system of assessment measures a narrow range of competences. Numeracy and literacy assessments are attempted by the national examinations which are not necessarily by the government such as UWEZO. At a time when the teaching of the 21st Century skills or competencies is coming to the fore, measurement of competencies and other soft skills is important (Mugo & Asiago, 2015). These are currently not catered for by assessments in Kenya schools.

The Taskforce Report (2012) pointed out that teachers are poorly prepared to develop tests and evaluate learning. Formative assessment which should assess continuous learning do not play a major role improving learning but of preparing learners on handling the national examinations. A worrying trend is that schools find it easier to buy commercial examinations from which teaching is done. These are prepared by entrepreneurs and not necessarily persons in education. The problem may be rooted also in how the training of teachers was conducted.

With the competence based curriculum, there is need to conduct assessment for learning; meaning that teachers can utilize assessments as analytical tools to improve students' learning (Mugo & Asiago 2015); it's a part of teaching and learning process and not an after process activity. Maclellan (2001: 307-318 in Mugo & Asiago 2015) observes that *'assessment for learning must be contextualized and represent meaningful tenets of human achievement with skills and competencies that are used in real world context'*

These assessments dwell on cognitive domain at the expenses of other learner attributes and competencies. Teachers with less cognitive potential are greatly disadvantaged. Hence teachers dwell in factual knowledge and repetition of the Bloom's taxonomy as they teach because experience and routine has proved that it these low levels that the national examinations require.

Stein, Dawson and Fischer, (2010) caution that formative assessment should not be discussed as opposed to summative assessment. Both are complementary tools that have a duty to support the learning process. Atkin (1999) recommends that assessment should promote and motivate learning processes, with an emphasis on using the outcomes to improve the quality of the processes. It is however noted that the practice in Kenya in the recent past has reduced learning to what goes to outcomes.

2.7.8. Contemporary and Emerging Issues

On mainstreaming of emerging issues in the school curricula, KICD (2014) conducted an assessment across primary and secondary schools and found out that emerging issues were not mainstreamed in all subjects, and not all teachers had knowledge on mainstreaming possibly because of insufficient training in this area. Owino (2013) observed that as a non-examinable subject, Life skills education becomes relatively inconspicuous and also negative attitude from both teachers and learners down plays the role of implementing the cross cutting programmes in the curriculum.

The KICD study confirmed that the attitude of teachers and learners impeded the teaching and learning of emerging issues. Teachers lacked commitment and passion as there was more emphasis laid on subjects that were nationally examined. Among other challenges cited in the teaching of emerging issues were inadequate teaching and learning resources, inadequate time, too much content and areas to cover under emerging issues and teachers lacked mastery in handling emerging issues. It was worse for schools with special needs as there are no sign words for representing emerging issues. School administrators were not supportive (ibid).

A study done by UNICEF (2006) on Life Skills Education in Swaziland revealed that teachers did not deem the subject as important since it was not in the curriculum. The MOE study tour report to Zimbabwe and Malawi indicate the need to enhance the capacity of teachers to enable them mainstream the emerging issues into the curriculum as stipulated in the Education Sector Policy on HIV and AIDs.

The challenge of teaching contemporary issues largely lies in the methodologies applied. In reference to environmental education, Choi et al, (2013) observe that failures of the common models for teaching could be in their inability to embrace whole school approaches that use practical demonstration of sustainable living to reinforce learning. This view is also advanced by the Eco-school initiative in South Africa which provides certification for schools that link environmental action and learning. Schools achieve more by being hands on in teaching and learning approaches while linking the curriculum to practical actions like recycling systems and water harvesting (Wildlife and Environment Society of South Africa, 2013).The solution to conveying information about contemporary issues lies in the ability of teachers and schools be more practical as a way of reinforcing learning.

2.8 Rationale of the Study Based on Literature Review

Apart from the theoretical base, the study is anchored on policy documents and other literature in different contexts. In view of recommendations for major curriculum reforms, the need to undertake curriculum reforms is clear and justifiable; more so because of the need to align it with the current trends, the Constitution and goals and aspirations of the national blue print of the Kenya Vision 2030. As early as 2007, the Kenya Vision 2030 stated that;

“There is, therefore a need to re-orient education to focus on the changing economic and technological trends, in line with the national aspirations as expressed in the Vision 2030” (GoK, 2007; pg 82)

The needs assessment survey for the curriculum reforms has been necessitated by gaps identified in the literature including the policy documents. They have all shown the need for the desired reforms in the curriculum but have not stipulated how the competence based curriculum for Kenya should be designed. Some have suggested that the development of competence

curriculum cannot be done without sufficient data to contextualize it in education for this country. In essence there has been no research done in this area, a gap which this study seeks to address.

This has been summed up by the Sessional Paper No.2 of 2015 and the National Education Sector Plan (NESP) of 2015 which stipulates that according to National Curriculum Policy Framework, the framework would be reformed using the stipulated curriculum development process; and hence the needs assessment survey, which initiates the process of curriculum development.

Since no research of this magnitude has been done in Kenyan for curriculum reforms, this study will stand out as a baseline that will tease out at this initial period the variables for monitoring and evaluation of the competence based curriculum as well as the final evaluation of the cycle.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

In this Chapter, the philosophical paradigm that underpinned this study is explained, the research approach is given, and then sampling, data generation techniques, data analysis process, trustworthiness and ethical considerations are presented.

3.2. Research Paradigm

This study adopted the pragmatist research paradigm which informs the view that research is guided by the value for the knowledge being sought. As opposed to the realist – positivist or relativist – interpretivists who hold distinctive worldviews about the world as being real or relative, this study drew from both paradigms to get a complete understanding of the subject under investigation (Hammersley, 2013; Onwegbuzie, 2012; Schwandt, 2015). The subject of this study – Needs Assessment for curriculum reform in Kenya - invites both perspectives since it is expected that there are indeed aspects of the curriculum that would inevitably be universal and standard across the entire republic; while, it is also expected that the curriculum ought to take care of the unique interests of learners at certain levels, regions and with varied interests.

3.3. Research Design

This study used a descriptive survey design. Both quantitative and qualitative techniques were used to collect data. The quantitative approach was used to describe variables and examine the relationships amongst these variables (Dornyei, 2007; Creswell, 2009). Qualitative research on the other hand made it possible to explore perspectives, attitudes, behaviors and experiences (Dawson, 2009) and focus on meaning and understanding. Data is generated using non – structured or semi structured instruments that allow for interaction of the researcher(s) and the respondents in a flexible manner that could generate in-depth data from purposively sampled participants in a naturalistic setting (Denzin and Lincoln, 2005; Lichtman, 2013; Yin, 2014; Jwan and Ong’ondo, 2011).

3. It helps answer questions that cannot be answered by qualitative or quantitative approaches alone.

4. It encourages researchers to collaborate across the sometimes adversarial relationship between quantitative and qualitative researchers in social, behavioural and human sciences.

5. It is “practical” in the sense that the researcher is free to use all methods possible to address a research problem. Researchers are able to solve problems using both numbers and words and combining inductive and deductive thinking.

The research methods that were used to generate both the quantitative and qualitative data as well as the data generation techniques are discussed in the subsequent subsections.

3.4. Research Methods

The magnitude of the Needs Assessment Survey for the primary level of education made it amenable to the survey method. It sought to establish views, experiences and attitudes of large number of participants over a relatively short period of time (Cohen et al, 2007). As stated in Chapter One, the Survey sought to establish the general needs for curriculum reform, the desired competencies, learning areas, talent nurturing and development strategies, pedagogical approaches, learning resources, assessment and contemporary/ emerging issues.

3.4.1 Quantitative Survey Method

Quantitative Survey Method was employed since the Needs Assessment is categorized under educational research. In this study the needs of learners, teachers and head teachers in Primary schools were assessed in terms of the reforms they desire on the Kenyan Curriculum. To ensure objectivity, reliability and

generalizability in the quantitative sense, principles such as representativeness of the target population and probability sampling were adhered to. Accordingly, structured questionnaires were used as the main data generation instruments, among other structured tools such as observation and interview schedules (Bryman, 2008; Kothari, 2005).

3.4.2. The Qualitative Survey Method

The choice of qualitative survey was still based on the need to know general trends, attitudes, practices, etc., but by generating qualitative data in the form of interviews, focused group discussions, memoranda, emails, Facebook and other social media platforms pictures, audio and video recordings that elicited in-depth data that captured the voices of participants (Given, 2005; Stake, 2014). Given the potential implications of this study, this method was necessary to make it possible to capture views from the diverse contexts (Creswell, 2012; Yin, 2014).

In this study, the *Survey* aspect was in terms of the spread of participants in all Counties in the Country – Kenya and the fact that the data were generated from a very large number of diverse participants (learners, parents, workers and key informants) over a relatively short period of time. The survey was enhanced through data generated from memoranda, and the social media. Nevertheless, the *Qualitative* tenets of the study were still observed. That is, the researchers still used data generation techniques (see the subsection on data generation techniques)

Critics of the qualitative survey method argue that it limits the richness of the data and therefore the extent of potential interpretation because researchers sacrifice depth for breadth, given the nature of a survey (Stake, 2014). Precautions were however taken to ensure that it is designed carefully to yield sufficiently in-depth data generated from different sources through multiple platforms in a flexible way (Lichtman, 2013). Therefore, this method provided a powerful tool for amelioration of the common criticism that Qualitative researchers work with very thin samples.

In the next sub-section, the specific data generation techniques used to generate data within the two approaches are explained.

3.5 Target Population

The institutions targeted comprised of all Primary schools and Teacher Training Colleges. Within the institutions, the study targeted all head teachers, Principals of teacher training colleges, teachers, and learners in Primary schools and trainees in Teachers Training Colleges (TTC's). The target population size was 71, 384 (Ministry of Education, 2011). **Table 3.1** illustrates the target population structure. Various Education Field officers and other stakeholders were targeted, especially as participants in the Key Informant Interviews to give information about the primary school level. **Table 3.1** indicates other respondents that were targeted.

Table 3.1: The Target Population Structure

| REGION | COUNTIES | No. of Primary Schools. |
|---------|--|-------------------------|
| Central | Kiambu Murang'a Nyandarua Nyeri Kirinyaga Laikipia | 3,187 |
| Coast | – Mombasa – Kwale – Taita Taveta – Lamu – Kilifi – Tana River | 1,697 |
| Eastern | – Machakos – Makueni – Kitui – Meru – Tharaka | 5,032 |

| | | |
|---------------|--|---------------|
| | – Embu | |
| Nairobi | – Nairobi1, 241 | 1,241 |
| N. Eastern | – Garissa – Wajir – Mandera – Marsabit – Isiolo | 404 |
| Nyanza | – Kisumu – Siaya – Homa bay – Migori – Kisii – Nyamira | 4,821 |
| R. Valley | – Nakuru – Narok – Kericho – Bomet – Elgeyo Marakwet – Nandi – Uasin Gichu – Turkana – West Pokot – Trans Nzoia – Samburu – Kajiado | 7,176 |
| Western | – Kakamega – Vihiga – Bungoma – Busia | 2,639 |
| Total | | 26,197 |

Source: MOEST (2011)

Key:

PRY- Primary Schools

Table 3.2: Other Targeted Organizations

| Organization | Units per category | No. of participants |
|----------------------------------|--|----------------------------|
| Faith Based Organizations | 2 faith-based organizations per county | 2 |
| Field Officers | 1) Quality Assurance and Standards Officers: 1 per county 2) 1 TAC Tutor per county 3) 1 EARC per county 4) 1 DICECE officer per county 5) 5 National Quality Assurance Officers (MOEST Directors) | 9 |
| Other Organizations | 1) KNEC 2) KISE 3) CEMASTEIA 4) Universities (Private and Public) 5) KEMI 6) KIPPRA 7) TSC 8) KNUT 9) FKE 10) Kenyan Diaspora and Embassies | 45 (5 per category) |

3.5.1. Sampling Technique

The study employed a multi-stage sampling technique (Mugenda and Mugenda, 2009), which involved random selection of the respondents who were expected to provide quantitative data. Purposive sampling was applied to select respondents who provided qualitative data. The target population size of Primary Schools was computed at **26,197** educational institutions in Kenya, as stated above (MOEST, 2011). In the Quantitative phase, the statistical procedure for sample size determination was applied; the researchers compute the sample size at **1504** institutions (Survey System, 2012). This represents the sample size at 5% level of

significance, with an error of **2.5%**. The details of the sample design are set forth in Figure 2 and Table 3.3.

Table 3.3: Sample Size Determination

| | |
|--|--|
| $\text{Sample size} = \frac{Z^2 \times p \times (1-p)}{c^2}$ | $\frac{(1.96)^2 \times (0.5) \times (1 - 0.5)}{0.025^2} = 1537$ |
| <p>Where : Z = Z value (e.g. 1.96 for 95% confidence level) p = percentage picking a choice, expressed as decimal (.5 used for sample size needed) c = confidence interval, expressed as decimal (e.g., .04 = ±4)</p> | |
| <p>Correction for Finite Population</p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> $\text{new ss} = \frac{\text{ss} \times (\text{ss} - 1)}{1 + \text{pop}}$ </div> | $= \frac{(1.96)^2 \times (0.5) \times (1 - 0.5)}{(0.025)^2}$ $= 1504$ |
| <p>Where: pop = population</p> <p>NEW SAMPLE SIZE</p> | <p>1504 Educational Institutions</p> |

3.5.2. Sampling Procedure for the Quantitative Phase

The Sampling was done through the following stages

1. The country is divided into eight geographic regions, as used by the Ministry of Education and each region is sub-divided into counties
2. From each county, sub-counties were selected as per the proportionate size of the region, randomly (and purposively for marginalized areas).
3. From the selected sub-counties, educational institutions were selected proportionately at random, as stipulated in the sample design (Table 3.3)

4. For the quantitative phase, from the selected educational institutions teachers were selected at random in primary and secondary schools. The same proportional selection technique will be applied for other institutions and field officers.

3.5.3. Sampling for the Qualitative Phase

Sampling was done using purposive techniques leading to identification of several participants, institutions and key informants. A total of **2431** participants took part in the study. The participants included primary school pupils, secondary and college students, parents, teachers, heads of school, workers in the informal sector and industry, Education field officers and various stakeholders. The list of participants is presented in **Table 3.4** below.

Table 3.4: List of participants in the Qualitative Phase

| REGION | PRY | FLD/OF | INF/S | IND | KEY | TOTAL |
|---------------------|------------|---------------|--------------|------------|------------|--------------|
| Aberdares | 92 | 10 | 06 | 07 | 20 | 307 |
| Mombasa | 49 | 09 | 05 | 07 | 19 | 187 |
| Northern | 146 | 11 | 04 | 04 | 21 | 431 |
| Metropolitan | 36 | 14 | 06 | 09 | 24 | 152 |
| Garissa | 12 | 06 | 05 | 03 | 08 | 58 |
| Lake | 140 | 09 | 05 | 04 | 21 | 384 |
| Mau | 208 | 12 | 05 | 06 | 18 | 647 |
| Nzoia | 77 | 12 | 04 | 06 | 19 | 265 |
| Total | 545 | 84 | 42 | 46 | 150 | 2431 |

The Qualitative data were generated using in-depth interviews with pupils and pupil leaders in schools, workers in the industry/informal sector and key informants. Focused group discussions were used to generate data from parents and learners. In

addition, memoranda were sought and received from individuals and institutions across the country. In total, about 250 memoranda were received. Further qualitative data came from opinions in the print and social media.

3.5.4. Pilot Study

Before actual generation of the data, a piloting of the tools was undertaken in ten counties in various regions across the country. These counties were randomly sampled. The questionnaires and interview guides were tested for appropriateness of question items in terms of language, content, clarity, time taken to administer as well as general administration logistics. In addition, the pilot study was used to determine whether: (i) the instruments would generate the type of data anticipated and; (ii) the type of data desired could be meaningfully analyzed in relation to the stated evaluation objectives. After the analysis of data collected from the pilot study, ambiguities and unnecessary content in the questionnaires and interview guides were addressed.

In pilot testing of tools, errors of omission or commission were corrected and information provided about deficiencies and suggestions for improvement (Gay et al, 2009). The piloting exercise ensured a common understanding and facilitated the identification of challenges that were likely to occur when the tools were administered to large number of similar respondents. Testing of the tools also provided a realistic sense of how long each tool would take to administer.

3.6. Data generation process

KICD in collaboration with Ministry of Education, State Autonomous Government Agencies such as Kenya Educational Management Institute, Teachers Service Commission, Kenya Institute of Special Education, Universities and CEMASTEAM carried out the needs assessment over a period of two weeks in, 2016. Generally, the reception by the respondents was quite warm. They welcomed and appreciated the fact that their views were being sought on what needed to be reformed in the Kenyan Curriculum for Schools and Colleges.

23 teams were dispatched to visit different regions of the country – specifically to schools, Colleges, Churches, the industry, in- formal sectors. In total 120 data collectors participated in the research process and covered basically all the Counties in Kenya (See the Table below). In addition, a call was made for memoranda from all Kenyans in the Media and a total of 79 were received. Twenty five (25) teams, each comprising four officers were dispatched to the counties. Each team covered 84 learning institutions. A total of 2100 learning institutions were targeted for data collection countrywide. A total number of 7 instruments were administered. County Education offices were the entry points into the selected districts. One-on-one interview sessions were conducted with Faith based leaders, TTC principals. The information they provided was captured using digital voice recorders. Questionnaires for education officers and DQASOs were administered to the officers at the Sub-county Education Headquarters. Within the schools, the head teachers facilitated access to the teachers, learners, parents and SMC members.

Once the organization of the selected respondents was completed, respective data collection instruments were administered. Using the observation schedule, available physical facilities were observed to establish their adequacy and appropriateness. All the established and accepted educational research ethical standards were adhered to during the administration of data collection tools.

3.7. Data Analysis

Data Analysis for the Needs Assessment Survey entailed the dual process of systematically applying statistical and logical techniques to describe and illustrate, condense and evaluate data. Quantitative data were analyzed statistically while qualitative data were analyzed thematically, as explained below.

3.7.1 Quantitative data analysis

The data from questionnaires were analyzed by use of the Statistical Package for Social Sciences (SPSS) software Version 17.0. This software provided general statistical information about the participants investigated and assisted in making inferences about the population (McNeill & Chapman, 2005).

3.7.2 Qualitative data analysis

The process of Qualitative data analysis involved six steps (Creswell, 2003; Jwan & Ong'ondo, 2011). The first step involved transcribing all the interviews and Focused Group Discussions (FGDs). During the transcription period, all the audio recorded interviews were turned into text material and labeled; they later became the primary data for subsequent analysis. The data was filed appropriately according to levels of education. Data already in script form – mainly from memoranda and print newspapers were also filed appropriately.

The second step was to do a workshop for all the officers involved in the data analysis process using pilot data as dummies. This went on for about a week until the team was confirmed to be consistent in coding process. The team was then divided so that data for the Primary level was analyzed using the pre-determined themes consistent with the research objectives.

The transcripts were first read to obtain a general sense of the information from the primary level and to reflect on the data's overall meaning. The third step was coding, which took place in three stages: open, axial and selective described in Creswell (2007) and Braun and Clarke (2006).

3.8. Trustworthiness of the Study

Trustworthiness is an important component that assures the readers that the findings of this study can be trusted to inform policy and practice for curriculum reform. In this section, the steps that were taken to ensure validity and reliability of the quantitative research process are explained. Then, the steps taken to ensure trustworthiness of the qualitative phase is also discussed.

3.8.1 Validity of the Study

The techniques used in validating the data collection instruments for this study included content validity and construct validity. To ascertain that the items were

relevant to the measurement of the intended content, the instrument was given to two groups of experts; one group was requested to assess what concept the instrument is trying to measure. The other group was asked to determine whether the set of items or checklist accurately represents the concept under study. Apart from being tested in schools, the tools were presented to a panel of experts and stakeholders for review prior to data collection. They commented on the wording of questions and statements and length of the instruments.

Construct validity was done to see whether the instrument reflects the intended construct and tests the presumed construct. The main concerns were what the tool was measuring and whether the scores would have a useful purpose and positive consequences when they are used in practice (Creswell, 2009; Mugenda & Mugenda, 2012). Construct validity was done by comparing the items in the tools with theoretical expectations and hypothesized behaviour to see how well they fit. Clear definition of constructs were operationalized and provided to pitch the study on the correct interpretation of the concepts. Use of mixed method approach also addressed the construct validity of the study.

3.8.2 Reliability of the study

The reliability coefficient was established by using the split half reliability technique which involved the administration of 'two' similar tests. Two 'halves' of the same test were administered on the same sample. The data obtained were correlated using the Spearman Brown Prediction formula of $Nr_{pxy} / 1 + (N-1)r_{pxy}$, where r_{pxy} is the predicted reliability coefficient for the total test.

At random, scored items were divided into two groups or alternatively, all the odd-numbered items were grouped together and all the even-numbered items together. Each subject's total score was computed and the scores from the two groups of items were correlated. Data with a high split-half reliability was considered to have a high correlation coefficient. The higher the correlation coefficient obtained, the more similar the forms and the higher the reliability (Mugenda & Mugenda, 2012; Craig & Wollack). The internal consistency of the items was determined from scores

obtained. Cronbach's coefficient alpha was computed to determine how items correlated among themselves.

3.8.3. Trustworthiness of the Qualitative research process.

3.8.3.1. Credibility

The aim of the study was to assess the needs for curriculum reform. It was necessary to ascertain the credibility of the study through *triangulation*, which basically means bringing together various perspectives to check the extent to which the study actually investigated what it set out to investigate.

The study utilized three types of triangulation: triangulation of data collection techniques, triangulation of data sources, and triangulation of analysis (Rothbauer, 2008; Jwan & Ong'ondo, 2011). During the study, various data generation techniques (interviews, focused group discussions, analysis of content in print and social media and submissions in the form of memoranda).

In terms of data sources, the triangulation involved getting data from different participants (Jwan & Ong'ondo, 2011). Each set of participants yielded different evidence that provided different insights regarding curriculum reform. The different sources were learners, parents, education officers, various key informants/stakeholders and various corporate institutions. The findings of the Quantitative phase were triangulated with the results of the Qualitative phase so as to give a more complete picture of the needs for curriculum reform.

CHAPTER FOUR

FINDINGS ON PRIMARY LEVEL NEEDS

4.1 Introduction

The primary school level gives learners an educational foundation from where they spring to other levels of education. It dictates the progression to secondary education and later to the tertiary levels. This study was a needs assessment for curriculum reform in primary curriculum. The findings focus on thematic areas that relate to the general primary needs, requisite competencies and the necessary learning areas. Information is also presented on identification and nurturing of talents, pedagogical approaches in the teaching and learning process as well as appropriate assessment modes. The chapter ends with a discussion on emerging and contemporary issues that need mitigation.

In every section and sub-section, the main points are stated and are backed by descriptive statistics and citations from what the respondents actually said. These are referred to in qualitative research as the voices of participants and serve as evidence intended to assure the credibility of the findings, as stated in Chapter Three.

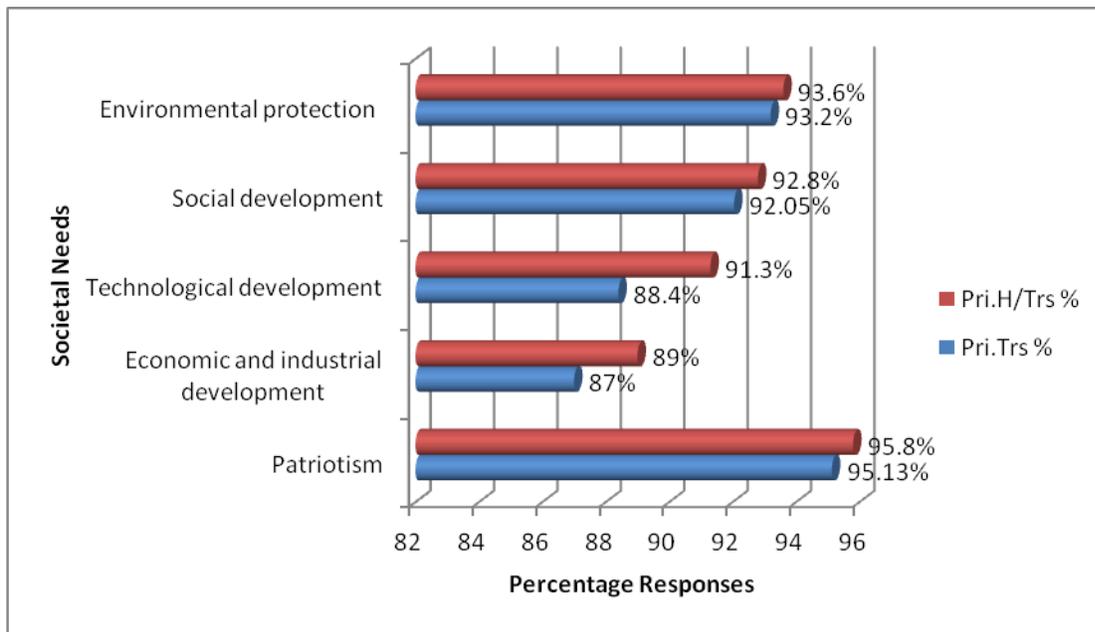
Responses were gathered from the primary school head teachers and teachers while an observation schedule was used to gather information on availability of resources. Outside the school, parents, employees in the informal sector, players in various industries and key informants across various sectors provided the information.

4.2 General Societal Primary Level Needs

The general societal needs account for the perceived discrepancies between what exists and the ideal. The needs assessment study sought to establish how the identified gaps could be bridged through reforming the primary school curriculum. Head teachers and teachers in primary schools were required to give their responses in regard to the extent to which societal needs should be emphasized in the curriculum. They were asked to indicate the extent to which the identified societal needs should be emphasized in the school curriculum using a five-pointer likert scale. They were required to indicate their choices by selecting 'N=Not at all', 'VL=very little extent', 'NS=Not sure', 'S=Some extent' and 'G= Great extent'. The responses were weighted out of 5 and averages derived. From the weighted averages, percentage mean ratings were further

derived. Head teachers and teachers' responses on each identified societal need which constituted the average percentage rating are presented in Figure 4.1.

Figure 4.1: Primary Head teachers and teachers responses on the extent to which societal needs should be emphasized in the primary level curriculum N=842



From **Figure: 4.1**, it can be seen that primary school teachers, 91.16% and head teachers 92.50% were in agreement that there is a need for certain societal needs in the primary school curriculum. Further details indicate that the teachers and head teachers rated the need for patriotism and environmental protection as the highest in society. Other areas that were considered pertinent in the curriculum include social development, Technological development, and economic and Industrial development. The findings however pointed out to societal needs that were given more priority than others.

4.2.1 Patriotism

A majority of teachers and head teachers expressed the need for the primary school curriculum to perpetuate patriotism. It was ranked first by the head teachers (95.1%) and teachers (95.8%).

Additional findings showed that ethnicity and disunity in the country which are closely associated with patriotism also dominated discussions among learners and parents who gave their views. According to parents, education was not fulfilling its role in fostering peaceful coexistence among different communities or countering other social ills which disrupt the general well-being among people. They stated the need for education to enable learners live

together by encouraging learners to attend school away from their local environment. The citation below is an example of the similar sentiments from the participants.

Parent: Education should promote unity and make our nation peaceful. However the current education system which allows quota system has confined learners and teachers to their local environments undermining interaction and cohesiveness unlike in the past. People used to fear hurting others because the society and schools had people from different communities. (PA-FGD-NMP-BUN)

The situation was further compounded by disunity among political leaders and citizens alike. In the view of learners, the political leaders were to blame for the deteriorating state of unity and peace.

Pupil: the politics of the country is declining because the candidates opposition and incumbent leader are always arguing now and then we need peace in our country (P-FGD-KAP-MAK)

Pupil:we need more political stability and not pointing fingers when problems arise (P-FGD-TRP-NYE).

These findings point out needs in the curriculum to ensure that citizens live together in peace and harmony. According to the learners, the leaders had an obligation to reduce nationwide instances of disunity among citizens, who were their followers. They were of the view that politicians should work together, not engage in hate speech, tribalism, favoritism to avoid post-election violence and other related political issues.

Pupil: Other issues that affecting us in Kenya are some politician incite people, they use hate speech in rally in the name of supporting somebody and you find mostly in Kenya you vote for the person because they come from your tribe. It is still taking place in Kenya because they were not taught at early stage. (P-FGD-OSP-NAR)

An analysis of the findings shows that education is still considered as a vital component of establishing patriotism in the country. It is further revealed that improvements need to be made in terms of a curriculum that contextualizes the realities of challenges in society so that the learners can relate what they are taught to their own experiences. In pointing out the gaps highlighted in the curriculum, respondents indicated that what is learnt about living together is not emphasized as a practical reality that learners should experience.

Parent:.....for example in class one we used to be taught about who is your neighbor, we were taught that Ouma is your neighbor.. Kamau is your neighbor and would only tell them in regards to sentence construction, but did not emphasize on them staying together.... (PA- FGD- JPP-LAK)

Much as social transformation through the curriculum has gained support, it requires to be complemented by specific policy measures that ensure children in school are learning the importance of tolerance (UNESCO 2014). This is because other factors outside the school exert a

strong influence on patriotism and may perpetuate various forms of intolerance in society. The pupils suggested that they need education that will bring about unity, working together and helping one another. They also expressed the desire to interact with others peacefully.

Pupil: We can do a lot like trying to live together like people of one country and helping one another (P-FGD-KRP-MUR)

Pupil: I would like to have good interaction so that I can socialize with people out there. (P-FGD-TRP-NYE)

4.2.2 Environmental Protection

The protection of the environment ranked second among teachers and head teachers, at 93.2% and 93.6% respectively. The learners demonstrated some level of awareness on the consequences of environmental degradation, like global warming. They also acknowledged that though they had some knowledge on practices that are favourable to environmental conservation, it did not translate to environment friendly practices.

In school we are told not to be dirty...and not to rubbish the environment...when we have finished...even if we have like biscuits...and we have already removed them from the paper bag...we go and put them in the rubbish (pit) (P-FGD-JAP-NAI)

Pupil: “We have been taught how to keep the environment clean but up to now I never understand why we keep throwing wrappers of food-stuff everywhere” (PL-SOP-USG).

4.2.3 Social Development

Another highlight for needs in the primary school curriculum was social needs. This was stated by 92.05% of the teachers and 92.8% of the head teachers. Among pupil leaders, the negative impact of corruption was cited as a drawback to social development. The pupil leaders called for concerted efforts to stem the vice in the country. They further encouraged the use of legal mechanisms to ensure that the perpetrators of corruption faced the necessary legal action.

Pupil: We need to stop corruption. Corruption is really hitting us so it requires a stern action taken on the perpetrators’. (PL-FGD-KIP-USG)

Learners and parents underscored the need for the curriculum to address tribalism. They cited the vice as the cause of unnecessary conflicts, killings, discrimination and as impacting learning negatively in certain areas. The parents stated the need for education to help learners to live

together. They observed that education should promote unity and peace by encouraging learners to attend school away from their local environment.

Parent: Education should promote unity and make our nation peaceful. However the current education system which allows quota system has confined learners and teachers to their local environments undermining interaction and cohesiveness unlike in the past. People used to fear hurting others because the society and schools had people from different communities. **(PA-FGD-NMP-BUN)**

Parents in areas prone to insecurity wanted an education that would improve social stability. They expected their children to make good choices against joining terror groups.

Parents: You know when we educate our children we have expectations. We want our children to help us as parents and also to help our country with issues of security, we want them to get the knowledge and tactics on how to help our country. But first we have to educate them. We also want them to be able to protect us as you know you can't employ a security person who is not educated on security measures. We want education that will help our children to be the future leaders and stay far away from groups like al shabaab. They will be making wise choices and believing that education is the start of their good life. And us as parent we will witness their success by seen the fruits of our children in education. **(PA-FGD-MAR-BAR)**

This view clearly shows that parents expect good values to influence character formation and deter their children from joining dangerous terror groups. Other factors mentioned included specific cultural practices that still go on in some communities. Pupils identified harmful cultural practices as factors that are disruptive to the well-being of the society.

Pupil: If people are educated they leave the bad cultural practices and so, many girls will finish school **(P-FGD-LGP-MAR)**

4.2.4 Technological development

Responses given by teachers and head teachers on the technological needs at the primary school level were rated at 88.4% and 91.3%, respectively. Responses on technological development were mainly focused around the use of computers in schools. Suggestions for technological advancement centered around the provision of computers in schools and ascertaining that pupils started using them. The parents and pupils also expressed a need to introduce technology in schools. Early initiatives and in the use of technology in schools were found particularly advantageous for technological development.

Pupil: We should introduce computers in at least every school especially to young children as young as about 10yrs or even 8yrs. **(PL- KIP-USG)**

Another benefit according to parents was that the use of technology can contribute to the improvement of education by giving pupils an opportunity to do their own learning by carrying out their research.

Parent: teach pupils in computer because if they teach them how to use the computers may be they could enable them for example to research more about the education they get like subjects they learn more about them **(PA-FGD-BPP-KAK)**

Despite these advantages, other respondents faulted the use of technology in schools. They observed that technology is misused sometimes. They pointed out that it has aided the leakage of national examinations.

Parent: ... It is sometimes used negatively. For example leaking of exam is largely through technology. **(PA-FGD- UNP –MAK)**

4.2.5 Economic and Industrial development.

The responses on primary level needs to fulfill economic and industrial development were still high among teachers, at 87% and head teachers at 89%. Owing to the challenge of the ever growing population, amidst limited job opportunities, parents acknowledged a skills based education that can lead to job creation and make Kenyans economically independent.

Parent: Earlier you could survive without education but nowadays the country is overpopulated so we are trying to educate our children to be skilled, able as well as possess some attributes which will enable them in this tough life **(PA-FGD-MAP-BAR)**

To support economic development further, the parents added that education in Kenya should focus on self-employment and creating employment rather than creating job seekers. At the personal level, there was also need for an education that leads individuals to contribute to overall economic growth of Kenya.

The general needs for curriculum reform tended to shed light on the disconnect between education and the realities in Kenya. These include the social, economic, political as well as the technological contexts. Pupils and parents underscored the need for education to help learners to relate curriculum content to real life, so as to solve problems and address real challenges affecting the country.

Parent:to me I feel the gap is that even when we are teaching we don't relate that content or real life,of-course the gap is that, we don't emphasize that the moment you teach everything in class let the child see the same in real life. There is a disconnect between the content and child's experience. Maybe as

we come up with the curriculum, we will see the ways of emphasizing that it is not the objective of getting things right but also the objective of applying every content you teach in real life.(**PA- FGD- JPP-LAK**)

The findings are an expression of a new role that the curriculum is expected to play. The expectations expressed are that in changing the different dimensions of society put forward, the curriculum will exemplify the integrated conception of education as a cultural, social and economic policy (Marope 2014). It further points out that society's expectations and demands are the foundations for study programmes and disciplines which are constructed for future generations (Moore, 2014). Recognition of the inseparable link between the society as it is and education, could be the only successful means of ensuring the reformed curriculum speaks to needs of Kenya.

The inter-relationship between the various forms of development was also brought out by the findings. The respondents stated that social development depended a lot on a corruption free environment where leaders exhibited integrity. From the study findings, it was further noted that politicians impacted heavily on national development. The parents were of the view that politicians should reduce politicking and concentrate on development work. Similarly, security and peace would spur economic development. It was clearly demonstrated that certain social challenges like insecurity and drug abuse were often related to poverty, which had denied some children the opportunity to continue with their education. The findings expound on cyclic nature of the challenges in the various dimensions of the society.

Parent: For Kenya to develop better, it needs educated people, Kenyans to be educated... children are smoking bhang, the chew miraa, they fight, the steal, what I am saying is Kenya should protect us because the country is not safe, poverty is high, and that's why people are killing one another, a lot of robbery, most of them are poor they cannot help themselves. (**PA-FGD- MAP –KWA-**)

We need to develop our roads, improve security, the cleanliness of our environment, improve technology and water facilities.(**P-FGD-KIP-USG**)

Implicit in this is also the need for a curriculum that attempts to work through the challenges based on a more integral view. The curriculum policies underlying the curriculum reform process and implementation should avoid separating and segregating in order to safeguard identities (Lenoir, Xypas and Jamet, 2006) or adopt perspectives that reject and expel those who are different. In its application, the curriculum should encourage social justice and peaceful conflict

resolution. Similarly, concerns for proper use of resources and the environment should be in-built.

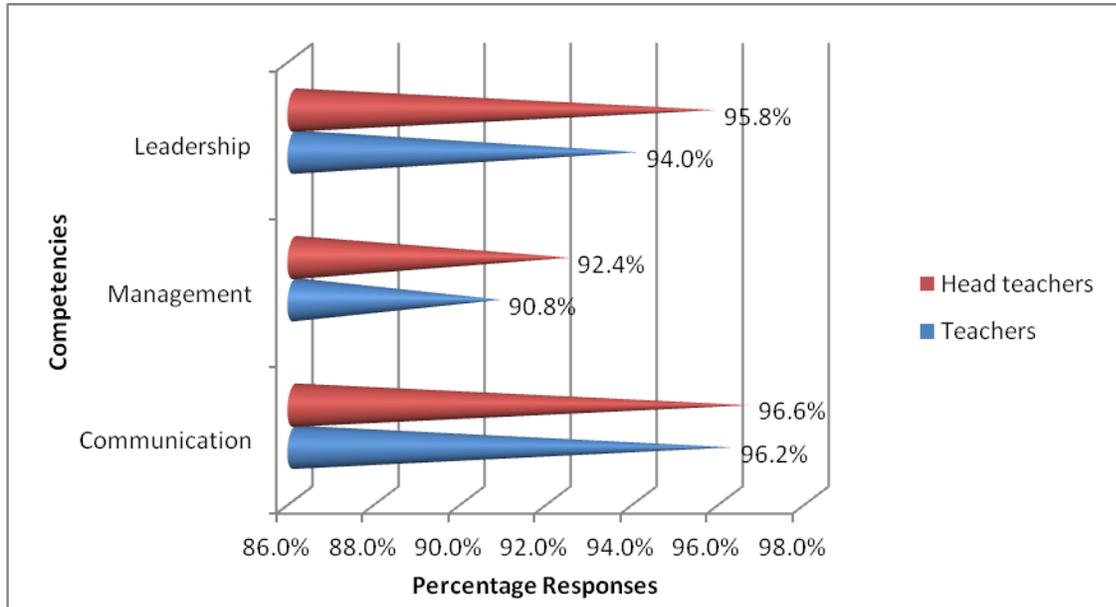
This calls for the creation of experiential situations in and out of school to develop a curriculum that strives for a country whose economy can be supported by a society that is peaceful and cohesive. The political development is expected to be in touch with the social, technological and cultural realities of its people. The solutions to the challenges outlined will therefore need to be tackled through curriculum approaches that target inter-relationships between the various facets of the society outlined. They also need to be re-contextualized by offering solutions that bring on board cognitive, ethical and emotional dimensions.

4.3 Competencies

Competencies generally refer to a set of skills, knowledge, attitudes and behaviors required for effective performance of a real-world task or activity. The survey further established the extent to which 21st century competencies should be incorporated into the primary curricula. The identified competencies were twenty one items, clustered into four 4Cs of the 21st century skills including; communication, collaboration, critical thinking and creativity whose results and discussions are presented below.

Primary school head teachers and teachers were required to rate the skills, values, attitudes and knowledge that should be emphasized in the curriculum. They were required to indicate their choices by selecting ‘N=Not at all’, ‘VL=very little extent’, ‘NS=Not sure’, ‘S=Some extent’ and ‘G= Great extent’. The responses were weighted out of 5 and averages derived. From the weighted averages, percentage mean ratings were further derived. Primary school head teachers and teachers’ responses on desired competencies classified under communication are presented in **Figure 4.2**

Figure 4. 2: Primary Head teachers and teachers Responses on desired competencies classified under Communication



The findings show that all the respondents rated each sub theme above 90%. The overall percentage rating for communication, leadership and management was 93.7%. This implies that these are the competencies that are expected to equip the learners for 21st C challenges and make them seize the opportunities brought about by new forces locally and internationally. Similar studies carried out in Singapore by (Soland et al, 2013 and Voogt and Roblin, 2012) provided a roadmap on key values that were in their education framework for 21st Cs which included; creativity, critical thinking, communication, collaboration, social and cultural skills. The education sector emphasizes these core values that are expected to be cultivated in all its learners.

4.3.1 Communication

Communication had the best rating for desired competencies at 96.6% and 96.2% among head teachers and teachers, respectively. Respondents from the informal sector and key informants were also of the view that communication is paramount for developing the ability to live with others. As components of communication, social interaction skills were emphasized. The skills were required to make learners live in their communities peacefully and behave appropriately.

Respondents in the informal sector noted that these skills were critical for any meaningful relationship in the world of work. They criticized the bias in just teaching Mathematics and English which may be absent within the social environment in which learners are bound to find themselves.

Inf: They need clear understanding of proper inter-personal and social relationships, including the long-term consequences of poor decisions to an individual and the society at large. We need a workforce with strong resentment towards corruption and well equipped to fight it morally and otherwise. A workforce that appreciates the ethnic diversity and is able to amicably integrate in all engagements. **(INF-SEC-NAI)**

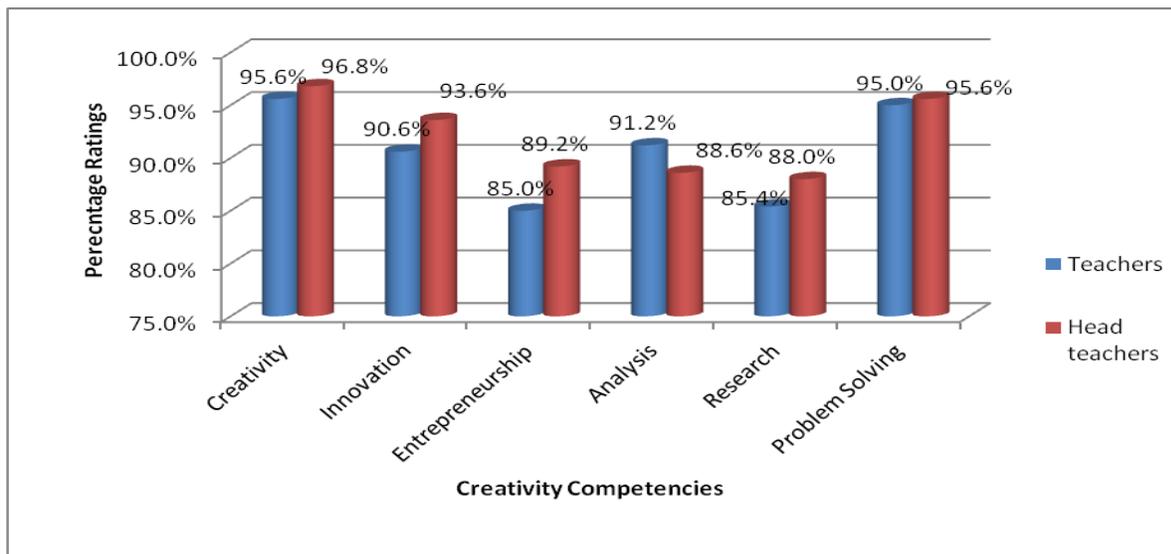
Digital literacy was also viewed as a means of enhancing communication and cooperation. Key informants expressed the need for learners at the primary school level to acquire technological skills. They made suggestions that children should start as early as ten years. The practical mode of delivery of content on technology was considered most productive because it allowed children to use realia.

ME: Digital literacy should be achieved at 10 years of age. This includes understanding communication principles, how to operate computers, internet usage skills and understanding of the basic principles of digital technologies and issues surrounding use of digital use (security and privacy, digital citizenship). **(ME-ED-AC)**

4.3.2 Creativity

The primary school head teachers and teachers' responses on desired competencies classified under creativity are presented in **Figure `4.3**

Figure 4.3: Primary School Head teachers and teachers Responses on Competencies under Creativity



The findings indicated that competencies associated with creativity were rated high by over 85% of both the head teachers and the teachers. The average rating of all the creativity competencies was 90.5% of the teachers and 91.1% of the head teachers. These responses can be closely linked to a study carried out by Rychen D.S. and Salganik L.H (eds.) (2001) which revealed that a creative person should have divergent thinking, problem solving skills, originality, and ability to see or create new values. Considering the convergence on the need to nurture creativity in the curriculum and the literature encountered, constructs of problem solving, divergent thinking, research and innovation will find their place in the content of the proposed curriculum.

The idea of entrepreneurship was prominent among respondents given the current situation of unemployment being experienced in the country. Parents expressed a desire to have children who are independent and able to do something in order to earn a living. Setting up a business to propel one's specialization was seen as key to reducing the dependence syndrome, since it would make people independent.

Parent: ...children to develop skills on entrepreneurship such as ICT and on business matters. We also want to develop positive skills and talents in business. (PA-FGD- KAP –MAN)

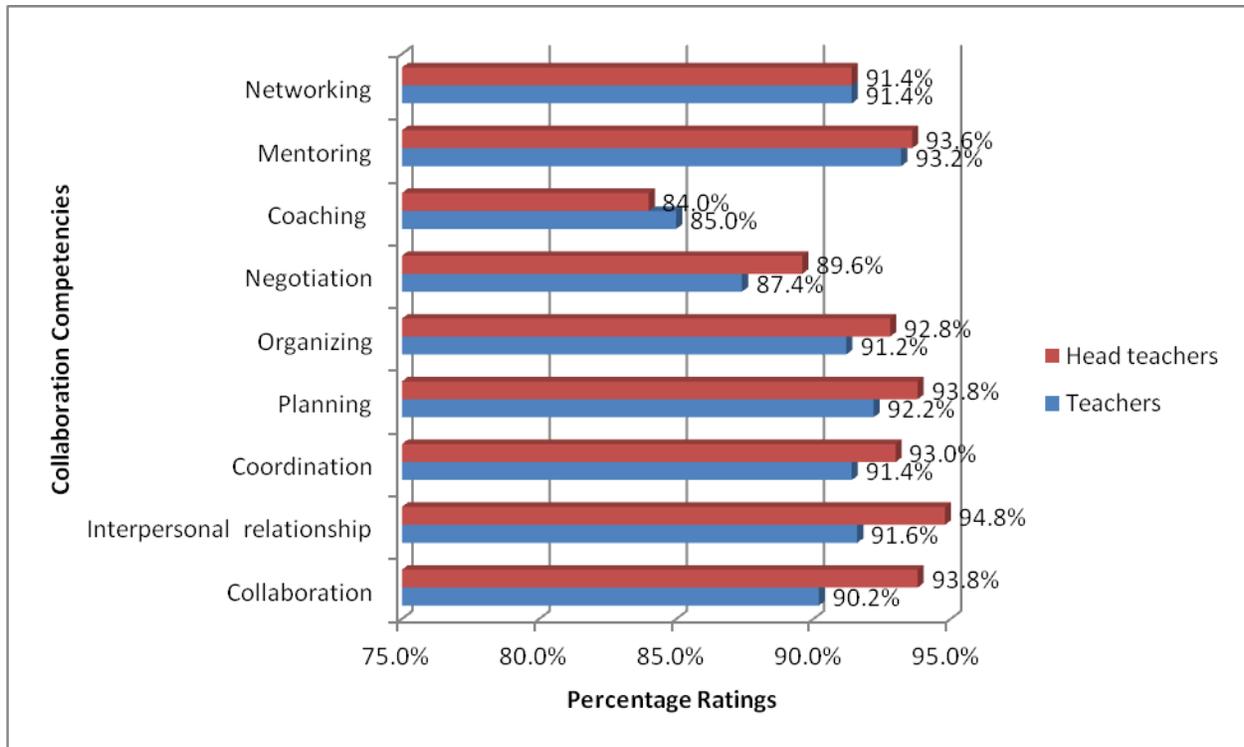
Parent: such a child should be independent, someone who can do things for her/himself. Those are children who should be able to do something to earn living ... they should have skills even in business. A very independent child. (PA-FGD- UNP –MAK)

While focusing on the curriculum content, secondary school students on their part reiterated that at primary level, Home science, Art & Craft, Music should be learnt so that learners can be able to use the skills learnt in life, earn a living from the arts and also to nurture their talents early enough.

4.3.3 Collaboration

The primary school head teachers and teachers' responses on desired competencies classified under collaboration are presented in **Figure 4.4**

Figure 4.4: Head teachers and teachers' responses on competencies classified under collaboration

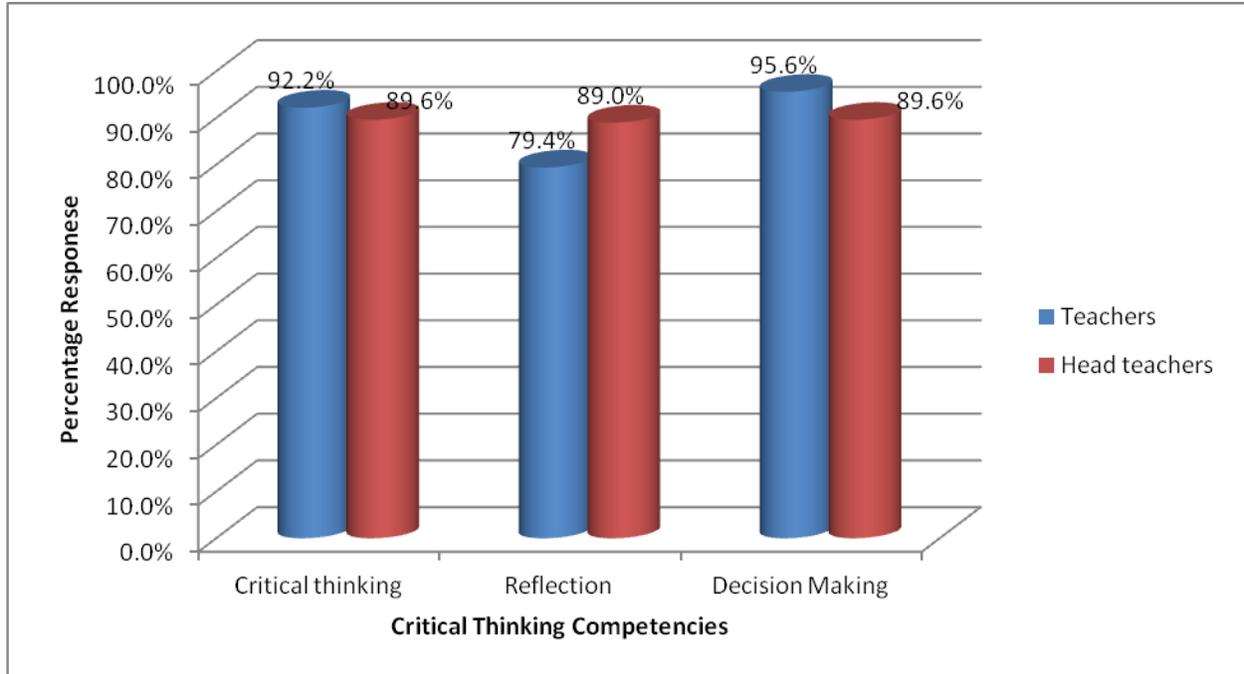


Collaboration was considered a major desired competence with an overall percentage rating of 90%. This critical because if knowledge is learned to support the performance of skills then learners will satisfactorily excel in aspects of knowledge, skills and values (Soland et al 2013 and Voogt & Roblin, 2012). Key informants noted that it was necessary for the curriculum to in-build the modeling of social and inter personal relationships as well as negotiation as a composite part of the teaching and learning process.

4.3.4 Critical Thinking

The primary school head teachers and teachers' responses on desired competencies classified under critical thinking are presented in **Figure 4. 5**

Figure 4. 5: Primary head teachers and teachers' Responses on desired competencies under Critical Thinking



The percentage rating for critical thinking and related competencies by primary school head teachers was as follows; critical thinking 92.2%, reflection 79.4% and decision making 95.6%. The overall mean percentage rating for the three aspects was 89.06% while teachers rated the same aspects slightly below 90%. This is consistent with other competencies rated earlier hence should be emphasized in the curriculum. The results show a strong consensus among different respondents on the aspect of critical thinking, reflection and decision making, presumably learners to develop critical thinking skills and the ability to adapt to new learning situations as they transit from one sub sector of education to another.

4.3.5. Practical Skills for self reliance

Parents observed that the curriculum currently in place favours learners who progress through secondary school and university. They expressed the need to teach skills that enable those who do not proceed to secondary schools to earn a living. Parents faulted the kind of education that is offered for having a lot of book knowledge that cannot help learners who do not go beyond primary school. Skills such as tailoring and agriculture would help them earn a living.

Parent 1: lakini kuna wale watabaki kiwango yao imefika..mwisho wao in class eight. sasa ni afadhali tu-involve the way nimesema iyo skills ili isaidie huyu mtu hajaendelea. for example, mambo ya technical skills, hii ya kutumia...ya kufanya kazi kwa mkono...mambo ya kufanya tailoring...hizo vitu zingine zenye at least ata-survive nae. kwa sababu akiacha class eight, hapo ni mwisho yake. labda arudi nyumbani, aanze mambo ya farming. na labda in primary, hatukuona mambo ya agriculture...ilitolewa. mambo ya music, tunaona watu wengi wako na hiyo talent lakini haiwezi fanyiwa primary ionekane. (**PA-FGD-OPP-NAR**)

Parent 1:but there are those who will remain at the class eight level. It is better like I said to have them involved in skills so that they assist those who have not progressed. For example, technical skills that entail working with the hands ...tailoring and other skills that can allow them to make a living. When they complete class eight it is their end. Unless they return home and start on farming, and probably Agriculture was not offered in primary schools. We see that many people have a talent in music but it cannot be fully developed in primary school. (**PA-FGD-OPP-NAR**)

The concept of self reliance was considered quite an important outcome of the practical skills that education should inculcate. The respondents were therefore of the opinion that alongside academic knowledge, children should be in touch with realities of life like feeding animals and farming. This according to parents should also manifest in the ability to make real things that are used in day to day activities.

INF: They are learning too much academic, and forgetting to associate with the normal life. They should be involved, exposed to practical life integration such as feeding animals at home and farming. Within the locality they belong to, they should do what is done there((**INF-SEC-NYE**).

Parent: this is where they should be able to make real thing like baskets, ropes, mwiko. Today people with these skills are scarce. (**PA-FGD- UNP –MAK**)

INF: I can only begin by saying that they should be creative ...Just like 8.4.4, in our time when you got to class six we had practice of making funny things such as mats and it was depending on how creative you were. That time you find that children are motivated by what is being done. ((**INF-SEC-USG**)

4.3.6 Self-care and Personal Development Skills.

Parents and learners felt that education should equip the child with skills that give them a sense of responsibility over themselves and help them navigate through their daily life. Parents and learners attributed the improvement of self-care and personal responsibility to the teaching of Home Science at primary school. They observed that the teaching of the subject at the primary school level would impart skills necessary for daily living. The learners could also be encouraged to extend their services to the community.

Parent: This issue really hurts me because whenever clothes are torn, however minor, these children cannot repair them. They would rather throw away the clothes since they lack the skill of repairing them...They cannot also replace a button... During my time we used to be taught in school. We learnt how to sew clothes using a needle and that is the knowledge I use even now **(PA-FGD- DPP-NBI)**

Pupil:I think they could not have cancelled the Home Science because most children like our class you can find most children, you can find a class eight pupil doesn't know how to sew their shirts when they are torn, they do not even know how to fix their buttons because they are not taught. They still wait for someone so that they can be taught . I think they should teach these things for our better future when we will be independent and require such skills in our life **(PL-SOP-USG)**

Parents justified the skills because they lay the foundation for any other pursuits that a learner chooses to undertake beyond the primary school. Learners on the other hand indicated that it was necessary for the primary school curriculum to equip them with knowledge to facilitate transition into secondary school.

Parent: A child who is able to read and write, be able to interact with others and be self- reliant **(PA-FGD-KIP-MUR)**

4.3.7. Skills for Career Development

The findings from the study outlined certain broad skill areas that the curriculum should expose learners to. In the context of career development, the various fields would help them explore their areas of interest and finally guide them to a particular area. This contributes to differentiation amongst learners by allowing those with inclination towards certain areas to choose their paths.

Parents: At least a child should have basic knowledge of various aspects of life, basic knowledge be it business, science and technology, carpentry, art craft such like things, even mechanics. He should be able to have basic knowledge that will help him or her develop interest in a particular thing **(PA-LKP-HOB)**

It was additionally pointed out by respondents in the informal sector that skills that are needed in job market should be focused on at all levels of education, including primary schools. It was expected that education at this level should develop self-driven, all-rounded graduates who are able to comfortably go for self-employment as an alternative to formal employment, considering the increasingly reducing opportunities in the job market. This could be achieved through linkages with industry to establish the specific gaps in the labour market and tailor education towards the development of such skills.

INF :Education should ensure that learners who leave school at different levels all the way from Primary school to University have interest in skills at those levels that are required and now missing in various industries and which they can easily learn. This will lead to quality output at all levels in industrial work, and inject some certainty in the prospects of improved and regular incomes for all workers who attain some skills. This can be achieved if a thorough research is done on skills required in various industries at all levels **(INF-SEC-NAI)**

Apart from supporting their engagement in the informal sector, pupils suggested that there was need for skills and knowledge that will prepare them for careers in the formal sector such as journalism.

Pupil: When I finish class eight, I want to get a good education grade and join university, and do a good course of journalism. **(P- FGD-MAP-NAR)**

4.3.8 Values

The respondents expressed a general view that the society had lost most of its values. Special reference was made to the negative impact of corruption which had adversely affected our society. They expressed the need to deal with corruption through high levels of integrity.

Parent: ... Corruption is finishing this nation. I don't know where we shall get leaders of integrity. The courts are corrupt. Law breakers are taken to corrupt court. Judges are corrupt. Where is integrity? Those who set exams are teachers and are the same people who disclose the questions. Very high integrity is needed in this area. **(PA-FGD- UNP –MAK)**

Learners also identified values like humility, kindness, respect, hard work, patience, love, peace, responsibility, honesty, obedience, kindness, truthfulness, good morals and integrity that would lead to good behaviour as a result of discerning right from wrong. They added that the curriculum should embody civic responsibilities and the national values as enshrined in the constitution. They proposed that curriculum should revive the values like honesty and love.

Teachers and parents in their lead role as people who can be emulated were expected to act as role models since learners would likely look up to them to model behavior. Support from home would bolster values. Parents suggested that learners should also learn religious values in order to equip them for the world of work.

Values identified include: discipline, organization, cleanliness, respect, patriotism, obedience, respect of other people's opinions. Parents in a rejoinder indicated that the transmission of values would only be successful if practically demonstrated. Since children could only emulate, what they saw, it was the responsibility of teachers and parents to model good values all the time so that children would best learn through observation.

Parent: Teachers to be united this will help the children to take them as their role models. Also the parents at home should refrain from bad behaviors which can lure the children. The parents should set a perfect example to their children. Knowing that child will emulate what the parents do **(PA-FGD-MAP-BAR)**

The parents indicated that values should be taught from an early age since they form the learners' character and cited some of the values to be included in the curriculum like discipline, respect, politeness and hard work.

Parent : At the lower level is also where behavior begins. The way you teach a child is the way he/she will become. If you see a child needs correction, this is when you should correct the child. If you want the child to go to church, then take him/her to church and he will learn that he should attend church. The child should also learn to respect his/her elders, their teachers as well as those who follow him/her. The child should also be taught what is bad and that is how we will get rid of rudeness amongst our children. A major contributor towards spoiling our children is the way we pamper our children. We pamper our children so much to the point where when they go to upper classes and the teachers address them harshly, some end up committing suicide. We as parents need to take the responsibility of instilling good behavior in our children alongside the teachers.**(PA-FGD-SEP-NYM)**

The respondents also felt that respect and obedience were important elements in the formation of learners. They said that these characteristics should be extended to parents, teachers and anybody older than the learners.

Parents:it's a must the child should know respect first. To respect parents, teachers and anybody who's older than him/her; and everybody in general. To be a child with respectand to be obedient and wherever he/she is sent, he/she should run, to respond once called, that is what I would like a child to have. **.(PA-FGD- NYP -NYM)**

Parents wanted the return of the cane as a form of punishment to deter indiscipline and instill moral values in children in primary schools. They were also of the view that if guidance and

counseling were strengthened, values such as obedience, honesty, cooperation, dedication and responsibility could be acquired by learners.

Parent: The removal of corporal punishment and human rights requirements, have made it difficult for teachers and parents to instill expected values. However, if guidance and counseling has strengthened values such as obedience, honesty, cooperation and dedication to responsibilities should be emphasized to a great extent. **(PA-FGD-SJP-BUN)**

The values postulated in the findings can be demarcated, albeit not inextricable, into two categories. The first one is the set of universal values, which also amplifies certain national values, including tolerance, peace, democracy, inclusion, equity and social justice among, others. These are not entirely divorced from other values like love, kindness and humility which have a place in society and how people relate at the personal level. It is however evident that that they are not mutually exclusive since the absence of any value leads to some disequilibrium in the society.

4.3.9. Attitudes

The importance of education as a transformative tool was articulated by industrialists who suggested that education should first of all develop the person. According to them, change of mind sets was a key factor in giving knowledge that what they learnt in school should alter their thinking and enable them to create jobs, not just rely on white collar jobs. There is need for education that will change people's mindset and help them realize that the knowledge acquired in school can be used in various ways, not just in white collar jobs

Industrialist...change the mind set and get a different mentality ...because why we end up all looking for white collar jobs.. .that has caused so much unemployment... there is more to education rather than you getting a job.... passing exams is not the only thing in life ...you can live...happy life not necessarily through cheating your way into the system and having all the shortcuts that people are taking...Let people learn patience, to value honesty and above all to know that they should be accountable for whatever action that they do ...later on they will pay for them dearly . **(MAN-IND-BAR)**

Pupils suggested that it was necessary for people to develop positive attitudes towards certain subjects that do not necessarily interest them, teachers and life in general. In addition pupils should be confident and cultivate a sense of independence.

Pupil: ...the blame can also be put on us because we have negative attitude towards the subjects and also towards the teachers when we don't understand... I would like to be a singer but if the teachers will not show us an example of how singers do we will be afraid and say I can't do this because if the teachers can't do even me I can't do... The teachers should not be abusing us because, let's say you've not done the work the teachers has given. Now when you go apologize to the teacher the teacher tells you, "So. You go move

away from me.” You will feel fear from the teachers in class and you will not understand (P-FGD-BJP – MUR)

They also suggested that education should help learners to develop positive attitudes for application in their future, including helping others. Such an attitude should be directed to both self and others. They also pointed out the need for attitudes that foster unity, cohesion and nationalism.

Pupil: I would like to have values like honesty, love for people, intelligent, trustful... I would like to be able to help others who are in difficult situations and help them get solutions to their problems (P-FGD-BUP-LAK)

Respondents indicated that pupils should be encouraged to appreciate one another despite their varied backgrounds since some live in the slums. Further, respondents suggested that orphans and most vulnerable children should be cared for and accorded equal opportunities.

Pupil: we should be taught on how to live with orphans despite our different family backgrounds.”(PL-SOP-USG)

Learners would like to see their teachers committed to their work, serve as role models and not just salary matters.

Pupil: We need teachers that do not just need money but they are ready to teach us what is good and what we should not do. (P-FGD- BJP –MUR)

These findings on competencies give options for a curriculum whose focus is more on how knowledge, values and attitudes can be used, (UNESCO-IBE 2015), rather than just acquisition. These options embed the needs of the learners and their interests, which are by extension, a reflection of development prospects of the societies with which they interact. The findings show that suggestions made for learning areas are quite broad. The concept of looking at educational programmes as a collection of separate strands, commonly known as subjects and disciplines is slowly being overtaken by new ideals, entrenched in the transnationalization of topics and competencies. The change is inclined towards generic non-domain specific competencies such as critical thinking and problem solving, creativity and learning to learn. Included are also cross-curricular topics like global citizenship, sustainable development and inclusion.(UNESCO-IBE 2015).

Additionally, the findings show that curriculum in its current state could benefit from interventions that would enrich the content and processes, and make them more engaging to create and transform the learner in tandem with the ever changing national and global contexts. This because in terms of conceptualization and implementation, the primary school curriculum does not embody the organizing principles outlined for competencies. The theoretical nature of implementation (KIE, 2008) reduces the opportunities for creating the situations that enable graduates to exit and fit into real life or work.

Learners at the primary school level must be provided with suitable situations, to attain the proposed competencies as they exit into real-life, or work related situations. Learning contexts without sufficient resources and supportive activities identified before are likely to inhibit development of the envisaged competencies. The need for comprehensive overview of the real life contexts to create futuristic curriculum programmes and adaptable learners is unavoidable. The outlined learning outcomes can be rendered invalid for the next level in instances where there is disharmony between the curriculum and the real life circumstances to which learners are expected to exit.

In a competence curriculum, learner participation is at the core of learning. Teachers in Kenya's primary schools need to understand the theory and practice of a competence based curriculum. Cardinet (1982) maintains that without real transformation of pedagogical and didactic actions of teachers, it is unlikely that learners will develop actual competencies. The observation of (Akyeampong et al., 2013) that trainees are not prepared to ensure that learners participate actively to understand the lesson calls for re-orientation and re-training of teachers to alleviate the pedagogical problems linked to quality and variety of teaching methods.

Alternative assessment procedures are also needed to support the new way of learning. Competencies cannot be effectively measured with multiple choice or paper-and-pencil tests (Resnick & Resnick, 1992; Quellmalz & Haertel, 2004; National Research Council, 2006, that are common practice in Kenyan primary schools.

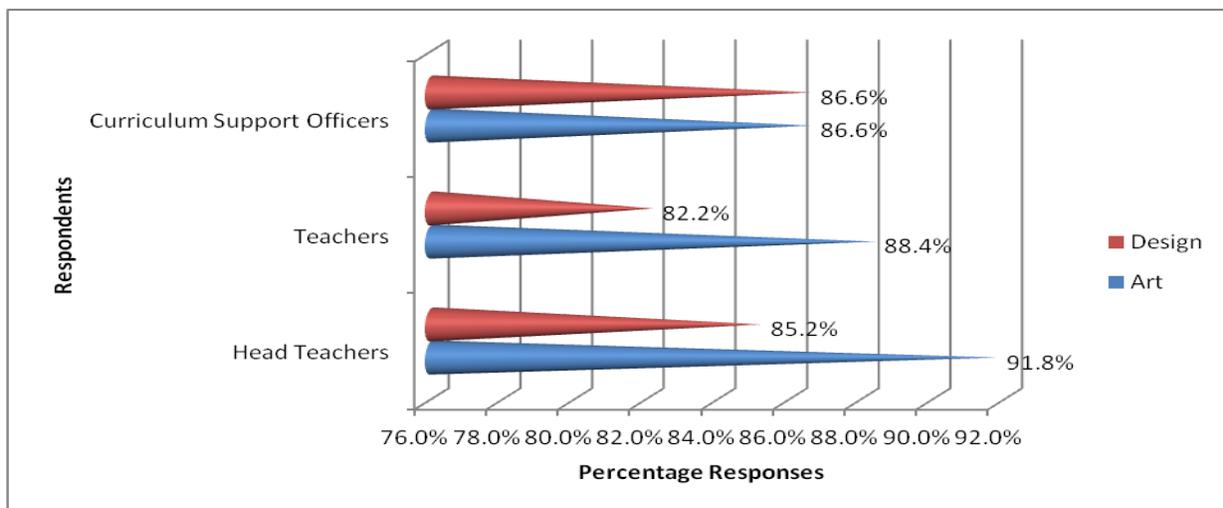
4.4 Learning Areas

Learning areas refer to content that has been designated in the curriculum to be taught and learned. The learning areas are clearly defined to show who is targeted by specific content, when and where. The study sought to establish the extent to which learning areas identified should be emphasized in the school curriculum. Responses were obtained from heads of institutions, teachers and curriculum support officers. The respondents were asked to indicate the extent to which the identified learning areas should be emphasized in the school curriculum using a five-pointer likert scale. They were required to indicate their choices by selecting ‘N=Not at all’, ‘VL=very little extent’, ‘NS=Not sure’, ‘S=Some extent’ and ‘G= Great extent’. The different individual learning areas were clustered into broader learning areas and composite means for each of them calculated. The findings are presented according to the broader categorization.

4.4.1 Extent to which Art and Design should be emphasized in the school curriculum

The responses were classified according to levels and based on the broader categorization. **Figure 4.6** shows responses from heads of schools, teachers and Curriculum support officers on inclusion of art and design in the primary school curriculum.

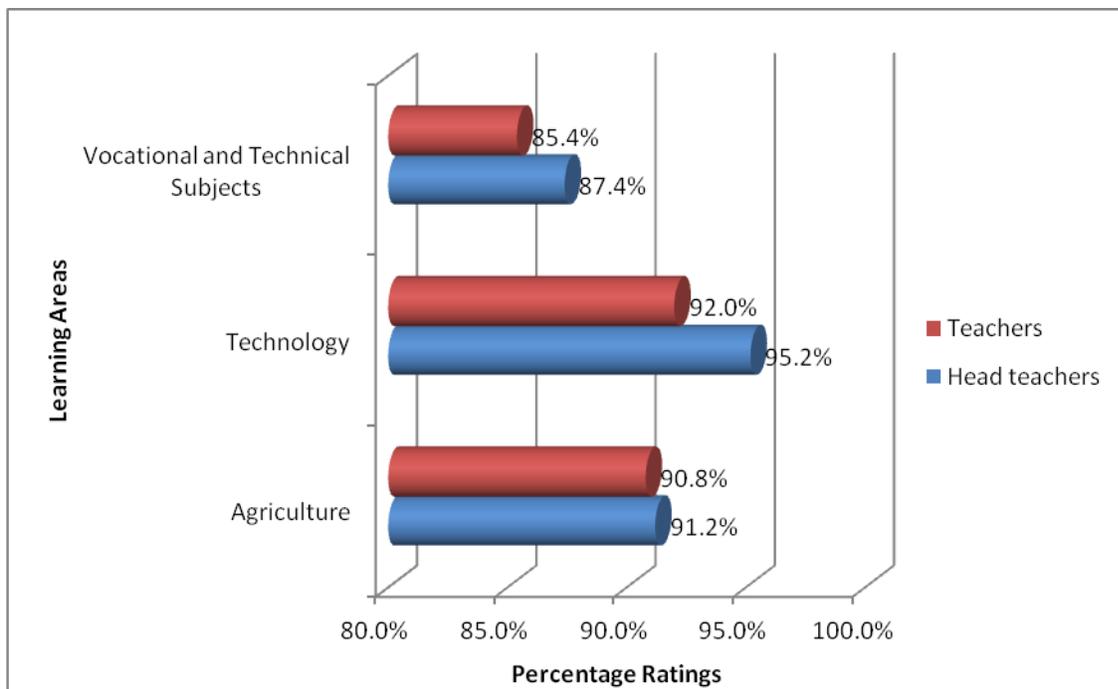
Figure 4.6: Head Teachers, Teachers and Curriculum Support Officers Mean Percentage Responses on the extent to which Art and Design should be emphasized in the school curriculum



Inclusion of design was rated highly with a mean percentage rating of 91.8% by the head teachers and 88.4% of the teachers in primary schools. On average, the percentage rating of inclusion of both Art and Design was high (above 80%) by the heads teachers. The curriculum support officers mean percentage rating of both art and design stood at 86.6% which was also high. This means that while designing the curriculum Art and Design should be considered.

The primary school head teachers, teachers' and curriculum support officers' responses on the extent to which agriculture, technology, vocational and technical subjects should be emphasized in the school curriculum **Figure 4.7**.

Figure 4.7: Head Teachers and Teachers Mean Percentage Responses on the extent to which Agriculture, Technology, Vocational and Technical Subjects should be Emphasized in the School Curriculum



The head teachers 95.2% and 92.0% of the teachers strongly supported emphasis of technology in the school curriculum. Vocational and technical subjects were least rated at 87.4% of the head teachers and 85.4% of the teachers.

Other respondents, including learners, parents and key informants decried the removal of practical subjects such as Agriculture, livestock rearing, Home Science, Creative Arts and Music, from the Primary curriculum. Vocational courses such as engineering, carpentry, masonry, handcraft, wood work, motor vehicle mechanics, needle work, cookery, knitting, tailoring were also proposed to form part of the curriculum at the Primary School level. Respondents credited food security to Agriculture and suggested its inclusion at the basic level as a compulsory subject. They suggested examination of those subjects.

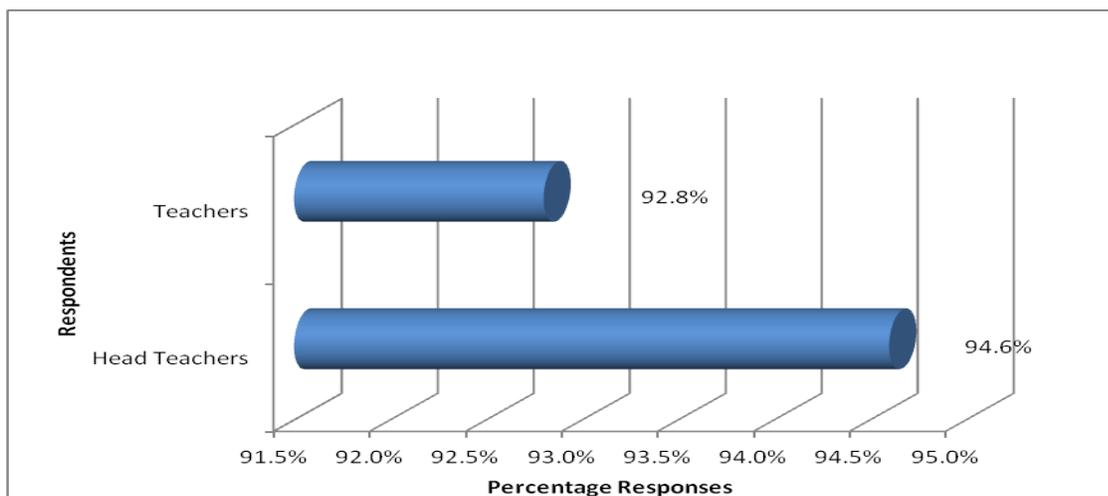
KI: And also another thing is that I will say that most of the economic activities of the community is livestock so if they can be taught something that is related to livestock, the drop out from the school can be useful to these nomads and at least when they drop out if they come back to the animal they don't become a burden to the parents, but they can help to keep livestock which is the economic activity of the people so that will also be a great assistance so that they are taught what they are brought up with instead of going to agriculture and things that are very rare here....**(KI-CDE-GAR)**

The advantages attributed the technical subjects are mainly their ability to raise levels of economic empowerment at the individual level and also contribute to the overall economic development.

4.4.2: Extent to which Physical Education should be emphasized in the school curriculum

The head teachers and teachers rated the extent to which Physical Education should be emphasized in the primary school curriculum. Their findings are presented in **Figure 4.8**.

Figure 4.8: Heads Teachers and Teachers Responses on the extent to which P.E. should be emphasized in the school curriculum

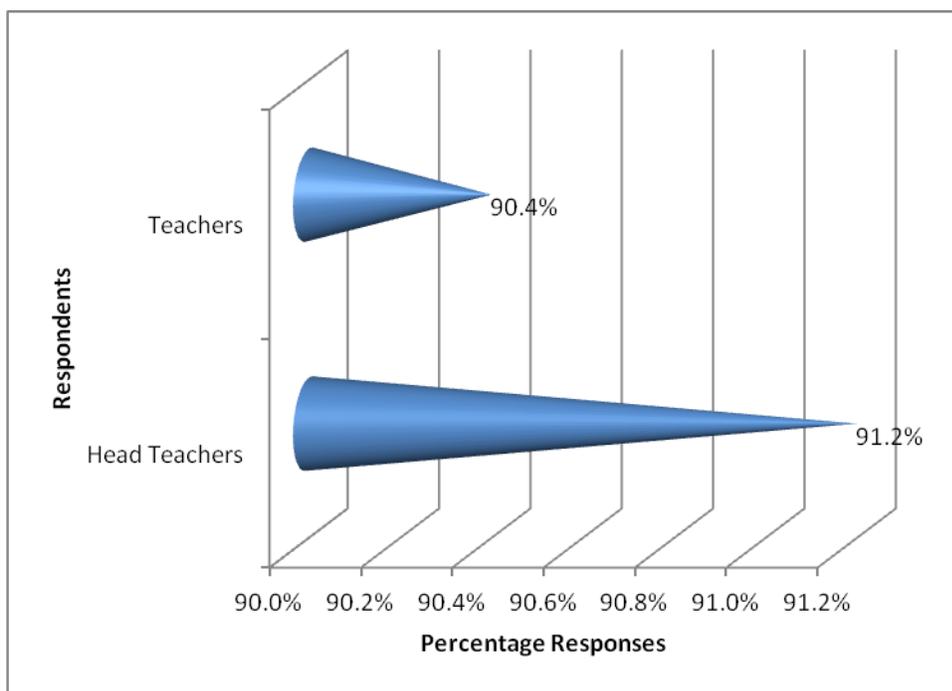


Majority of the head teachers (94.6%) and 92.8% of the teachers strongly supported emphasis on P.E. in the school curriculum. This indicated that P.E. is important in schools and thus should be emphasized in the envisaged primary school curriculum. The parents laid emphasis on the importance of Physical Education in the school curriculum. On the contrary, exclusion during implementation down played its importance.

4.4.3 Extent to which subjects categorized under Humanities should be emphasized in the school curriculum

The head teachers and teachers rated the extent to which humanities subjects should be emphasized in the school curriculum. Their findings are presented in **Figure 4.9**.

Figure 4.9: Heads teachers and Teachers Percentage Responses on the extent to which subjects categorized under Humanities should be emphasized in the school curriculum



Subjects categorized under Humanities were rated highest by the head teachers (91.2%) and teachers 90.4%. This implied that humanities subjects should be highly emphasized in the envisaged curriculum. Learners and parents preferred the teaching of History, Geography and Social Studies to raise the learners' consciousness of the different cultures nationally and internationally. They suggested that learners should be taught relationships between nations as

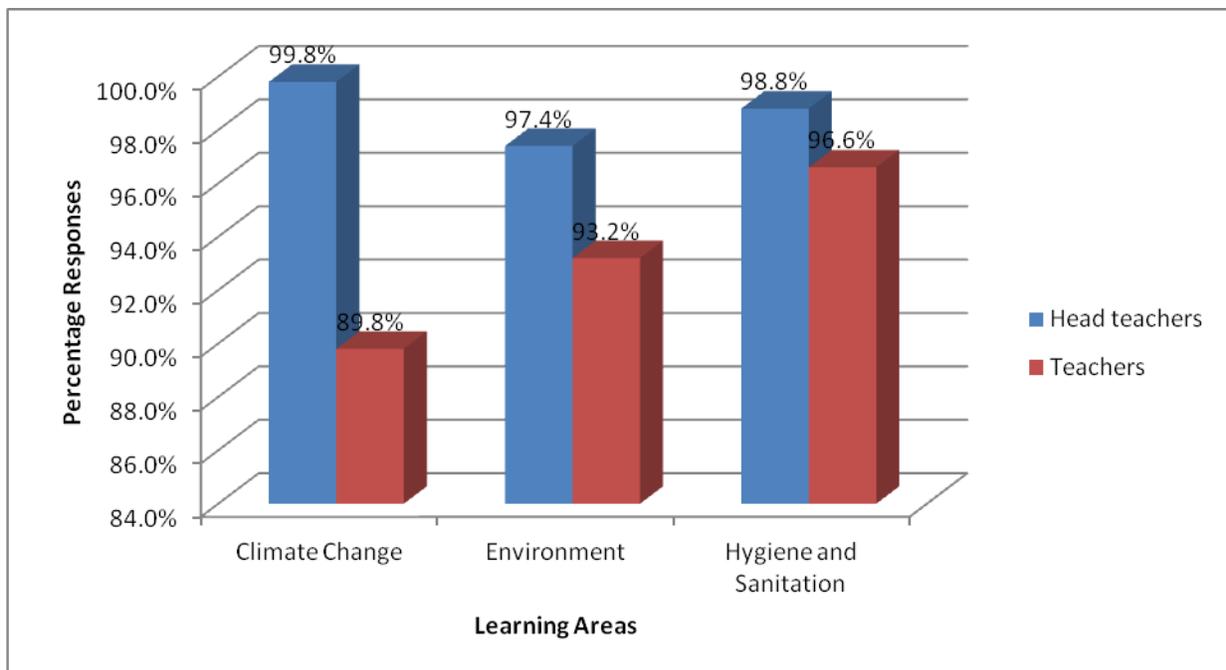
well as basic history of their country. Respondents were of the view that in Social Studies topics about economics should be emphasized rather than cases of human evolution.

Parent: So in primary children should be able to find out who she or he is really is, to value others, know human relations, the reason why nations are related to one another at least should there, should know the basic history of their country and country’s development, should also be able to speak and write good English and good Kiswahili, apart from international thing... that child should be able to do basic mathematics, should be able to do some work in science to understand himself, plants some form of agriculture at this level the child should be exposed to every form of a stage sine if you denies the child that kind of a ability then at higher stage when he narrows down to specific area, there are areas which will miss overall. (PA-FGD-MGS-USG)

4.4.4 Extent to which Environment and Climate Change Aspects should be emphasized in the school curriculum

The head teachers and teachers rated the extent to which environment and climate change aspects should be emphasized in the school curriculum. Their findings are presented in **Figure 4.10**.

Figure 4.10: Heads teachers and Teachers Mean Percentage Responses on the extent to which Environment and Climate Change subjects should be emphasized in the school curriculum

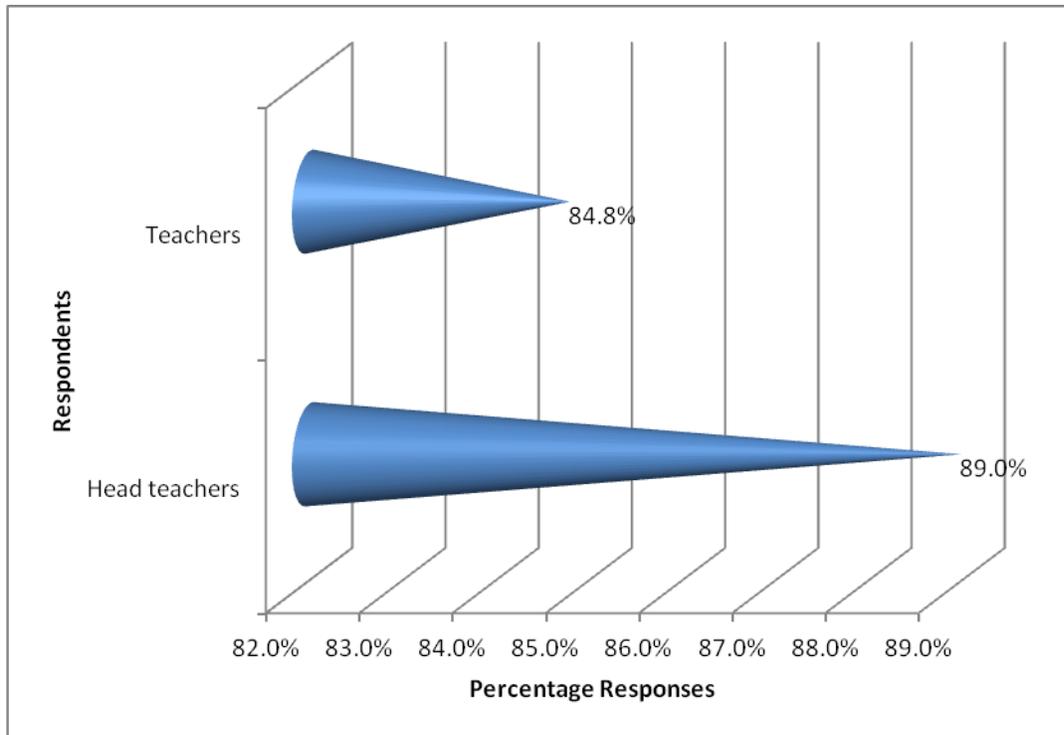


Almost all the head teachers (99.8%) indicated that climate change subjects should be emphasized in the envisaged curriculum. The head teachers 97.4% and 98.8% indicated that

environment and hygiene and sanitation subjects respectively should be emphasized in the envisaged curriculum.

Head teachers and teachers' responses on the extent to which entrepreneurship should be emphasized in the school curriculum are presented in **Figure 4.11**.

Figure 4.11: Heads teachers and Teachers Mean Percentage Responses on the extent to which entrepreneurship subject should be emphasized in the school curriculum



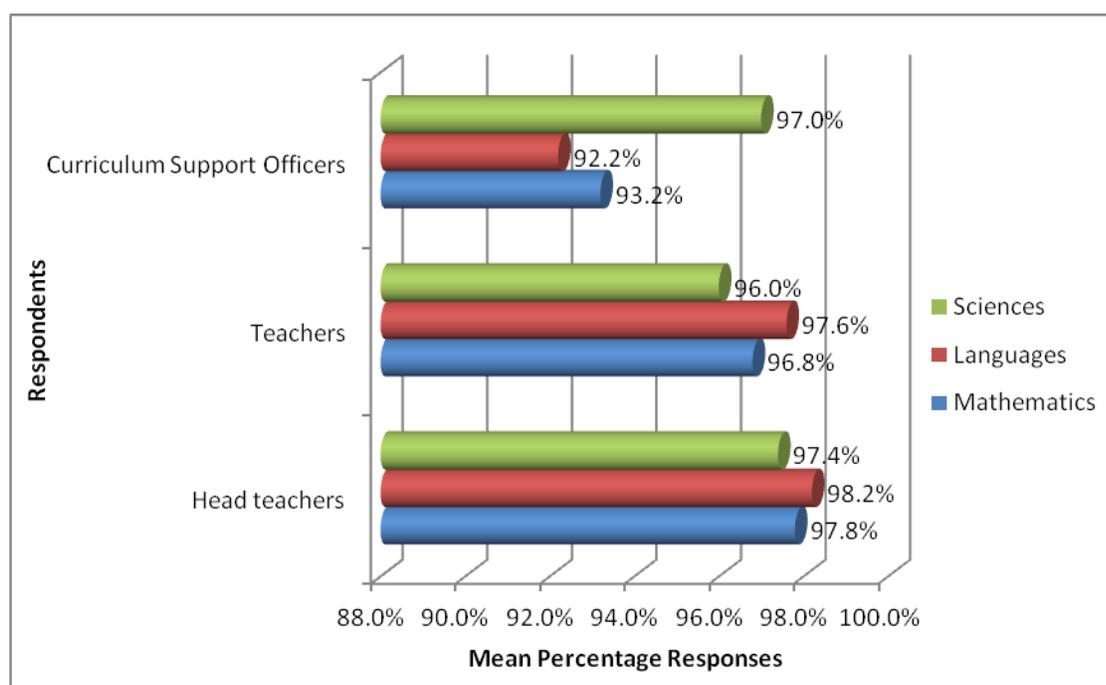
Majority of the head teachers (89.0%) and teachers (84.8%) indicated that entrepreneurship should be included in the envisaged competency based curriculum. The respondents underscored the role of entrepreneurship in spurring economic growth and industrial development. Content on financial literacy would enable learners to acquire skills to save, spend wisely and invest.

Pupil: ...what about the person who scored D? Where do they go? If you are taught how to become an entrepreneur they obviously will have an idea of making ends meet that is starting small and then growing big.” (PL-SOP- USG).

4.4.5: Extent to which 21st Century subjects should be emphasized in the school curriculum

The head teachers, teachers and curriculum support officers rated the extent to which Mathematics, Languages and Science subjects should be emphasized in the school curriculum. Their findings are presented in **Figure 4.12**

Figure 4.12: Head teachers, Teachers and Curriculum Support Officers Responses on the extent to which 21st Century subjects should be emphasized in the school curriculum



The findings show that majority of all the respondents (above 90%) supported emphasis of Mathematics, Languages and Sciences in the envisaged curriculum. The head teachers, teachers and curriculum support officers overall mean percentage ratings for the subjects were 97.8%, 96.8%, and 94.1% respectively.

The importance of Mathematics, Science and Languages to the assimilation and acquisition of the 21st century skills is highly emphasized in the country's blue- print for economic development which flags the teaching of mathematics, languages and sciences as being vital to the country's development. The respondents affirmed the vital role played by Science and Mathematics in relation to employment, innovation, food security and prevention of diseases.

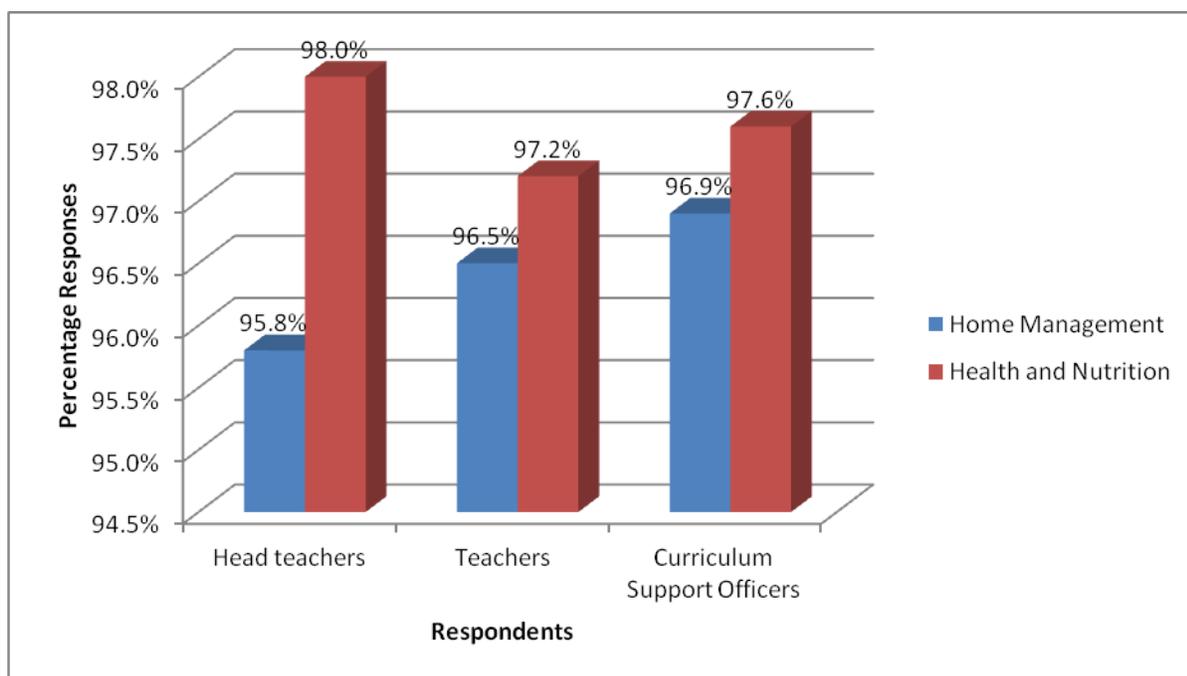
Pupil: ability in Science and Maths so that I can make a clone of human being ...we should learn sciences to avoid transmission of diseases, mechanism (**P-FGD-HPP-KIL**)

Studies have also shown that countries like Singapore and Malaysia with high technological development have put great emphasis on Mathematics and Sciences as a foundational requirement for their technological advancement.

4.4.6: Extent to which Home Science should be emphasized in the school curriculum

The head teachers, teachers and curriculum support officers rated the extent to which home science should be emphasized in the school curriculum. Their findings are presented in **Figure 4.13**.

Figure 4.13: Head teachers, Teachers and Curriculum Support Officers Responses on the extent to which Home Science Subjects should be emphasized in the school curriculum



Inclusion of health and nutrition was rated highly with a mean percentage rating of 98.0% by the head teachers, 97.6% of the curriculum support officers and 97.2% of the teachers. Learners also underscored the need for health education, including good grooming. They also needed to be aware of Ebola and other emerging health issues. Some key informants were of the view that age appropriate health education content should be taught in line with Articles 10, 11 and 24 of the Constitution of Kenya 2010.

On average, the mean percentage rating of inclusion of the home science subjects was high by 96.9% of the head teachers, 96.9% of the teachers and 97.3% of the curriculum support officers. This means that while designing the curriculum home science subjects should be highly considered.

4.4.7 Languages and Communication

Learners expressed the need to learn English and Kiswahili in order to be able to communicate and prepare them for careers such as law and journalism as well as for transition to higher education. Some respondents were of the view that public speaking, writing, research and good manners should form part of the curriculum. Further, basic Fasihi ya Kiswahili and Literature in English and indigenous languages should be introduced in middle classes and should later be offered as optional in upper classes. Simple class readers can be prescribed in achieving this objective. Parents highlighted the need for Kiswahili to be emphasized for the role it plays in communication within East Africa.

Pupil: To become a lawyer you should know English to communicate with those who do not know other languages (P-FGD-MAP-NAR)

Parents emphasized the role of mother tongue as laying the foundation for communication and the need to anchor it in the curriculum just like in countries like Japan.

Parent.....countries like Japan, India, Korea, they all speak their language. In our country, mother tongue should not only be taught but also doing an exam in the same. (PA- FGD- UNP –MAK)

With regards to language, the respondents were of the opinion that language should lay emphasis on comprehension, written expression, writing, oral and reading fluency. The learners in primary schools suggested an improvement of their interaction with the outside world through foreign languages. The languages include German, French, Arabic, Hindi, Russian and Chinese.

Pupil: We should learn foreign languages like German, French, Chinese, Russian, Arabic, Indian ... so that we can be able to communicate with foreigners (P-FGD-HPP-KIL)

4.4.8 Technology and ICT Related Subjects

Findings from the study show that key informants underscored the need for technology in education especially in this digital era. They added that this would make children adaptable to the technological evolution in a world where everything is being computerized. It was observed that the information should be imparted early, to equip learners with the skills earlier, instead of waiting until they had advanced beyond primary schools. The element of teacher preparation came to the fore as a means of ascertaining that learners were not ahead of their teachers in technology.

KI: ...if we compare developed countries and developing countries, countries like U.S, U.K these young children are exposed to these things so they grow up knowing them so they can come up with new ideas if you are exposed early to these things you can develop your talents e.g. when you grow up you can come up with a lot of apps and whatever basing that you had these things earlier in your life. **(KI- ROU-HOB)**

The parents also observed that there is need to look at a framework for implementation of ICT in the curriculum in anticipation of the challenges it may pose in relation to acquisition of linguistic skills. It was important for education to develop ICT skills without jeopardizing the quality of language that learners are expected to acquire.

4.4.9 Value-Related Subjects

The respondents suggested that CRE, IRE and HRE should be given priority in the curriculum reform, since religious education is a guardian of values and morality. Some were of the view that CRE should be a standalone subject unlike the current status where it is integrated with Social Studies. Additionally, pastoral programmes, social ethics and guidance and counseling should reinforce religious subjects in promotion of positive values in the learners. They also observed that while African Traditional Religion is taught in the current CRE syllabus, it is misplaced and therefore should be taught as a separate entity. However, they suggest that it can be mentioned as an introduction to what Africans believed in before the advent of Christianity.

Learners stated that unity should be taught in schools. An organization proposed that a new subject be introduced to cover positive attitudes, mutual respect, harmony, nationalism, patriotism and religious tolerance. They suggested that this new subject could replace CRE.

KI: There needs to be a new subject to cover these three values where the various cultures will be studied for the purpose of understanding how they can be moulded into nationhood. This subject should replace religious education at primary level, which can be best taught as an option during pastoral studies. **(ME-RI).**

Similarly, a learner indicated that CRE should not be taught in school citing the multiplicity of religions existing in the school context.

Pupil: we should also learn science, English, and many more. A subject like C.R.E should not be learnt because in our school, we have many religions like Muslims and Hindus. They learn C.R.E and when they go back to the mosques they don't understand anything (**P-FGD-TRP-NYE**)

The loss of African cultural values also raised concern. Parents observed that there is general neglect of the African culture and the curriculum should therefore ensure that content in this area is provided so as to avoid a situation where the Western culture will take over the youth.

4.4.10 Social and Life Skills

Additionally, the respondents emphasized the importance of including social and life skills such as self-esteem, critical thinking, self awareness in the curriculum in order to prepare learners to deal with day to day challenges.

Parent:there is the subject that started called ' life skills' it was started and died afterwards.... If life skills were taught today, some of these social problems we have could have been taken care of, it taught children how to take care of themselves and others people. It taught them how to have interpersonal skills and how to treat about other people... (PA- FGD- JPP-LAK)

Pupil: ...good manners, social values... health education... interaction with others... life skills..., so that Kenya isn't left behind. (P-FGD-NAP-LAK)

In the Kenyan context, the findings show that the decisions that are made about the learning areas, content or subjects have put into consideration many factors. First, the national aspirations and prevailing needs of the nation should provide the building blocks for the curriculum of the future. Secondly, the policies and vision for education at a given time become the over arching goal. In Kenya, the curriculum framework for basic education is founded on opportunity and excellence as some of the key pillars underlying its development (KICD, 2016).

The discourse on the choice of subjects or content in the curriculum is centered on the debate between content that makes provisions that are authentic for the individual learners in their society, without necessarily marginalizing the nation from the pre-dominant global trends that are shaping education. Ideally the option of providing a broad base that gives the learner an opportunity to choose and have a niche in areas of interest would be the best. That opportunity must also be largely aligned with preparing the learner for further studies and skills for adult life.

The renewed emphasis on content that suits education in the 21st Century needs an intricate balance in the choice of learning areas. On the one hand, proposals for taking care of the learner's aspirations ought to be adhered to. On the other hand, the local societal challenges, national needs and global interests should also be defined in the learning areas, which are predictions of the future being forged by education. Decisions also have to be reached on the level of fusion of the content areas or disciplines and the non-domain specific competencies.

In spite of the proposed considerations and justification for the choice of content, Tawil (2012) discounts the idea of looking at education from a purely utilitarian or instrumental approach, that leans towards the gains at the individual or national level. Instead, attention should be given to sustainable human and social development. The humanistic dimension should be emphasized to ensure a renewed purpose for education.

4.5 Learning approaches

These are the instructional strategies and techniques used in the delivery of curriculum content. Broadly known as pedagogy, learning approaches deal with the practice of teaching and learning. Primary schools head teachers and teachers were also presented with items in a questionnaire which sought to establish the level at which they felt that different learning approaches should be used to deliver the primary level curriculum. Likert scale was used to establish the frequency at which they would prefer using the different learning approaches with options of never, rarely and always on the scale. Their responses were analyzed and presented in form of tables with percentage ratings and average percentage ratings per cluster.

4.5.1 21st Century teaching strategies

The head teachers rated brainstorming at 92.67% while discussion had a percentage rating of 95.3%. A larger proportion of primary school head teachers preferred use of discussion method to brainstorming. Teachers rated discussion highly with a percentage rating of 96.3%. This compares very closely with the level of rating this approach that was given by the head teachers at 95.3%. Teachers had a rating of 87.70% on brainstorming and this was a bit lower than the rating given by their head teachers. It is though worth noting that both approaches had relatively high percentages in terms of preference by the respondents. This shows that both the head

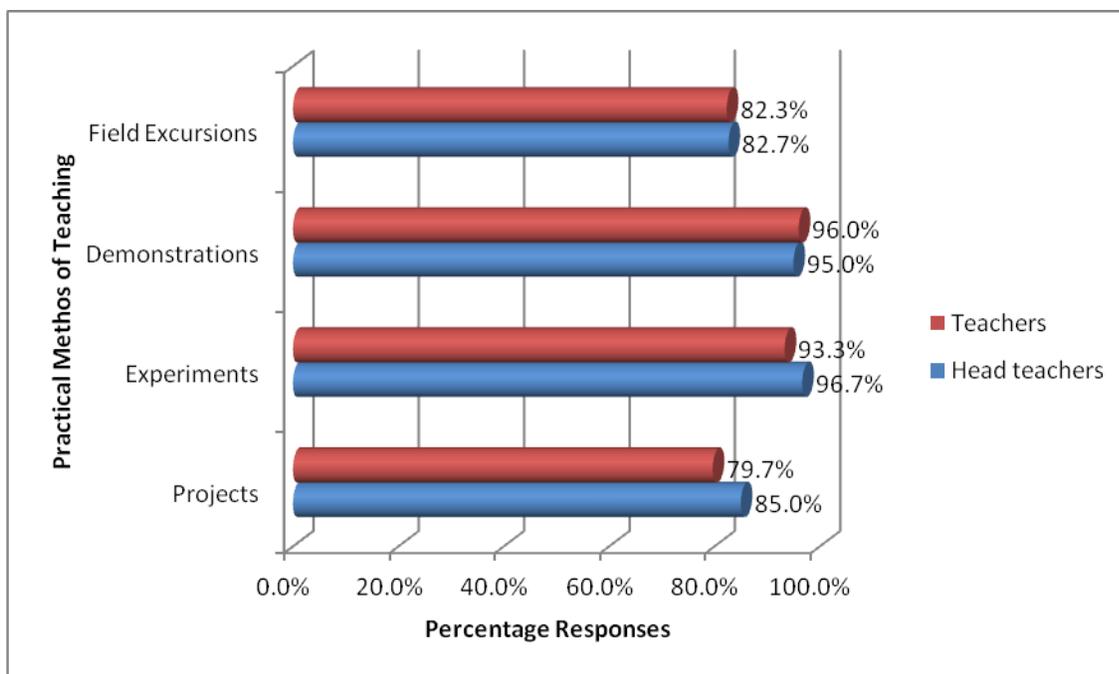
teachers and teachers highly prefer the use of discussion method. During discussions, learners sharpen their communication skills and they also learn how to collaborate.

4.5.2 Practical Methods of teaching

Primary school head teachers and teachers responded to a set of items in a questionnaire regarding the extent to which they would want to adopt practical based methods of teaching.

Their responses are presented in **Figure 4.14**.

Figure 4.14: Head teachers and Teachers Responses on use of Practical Methods of teaching



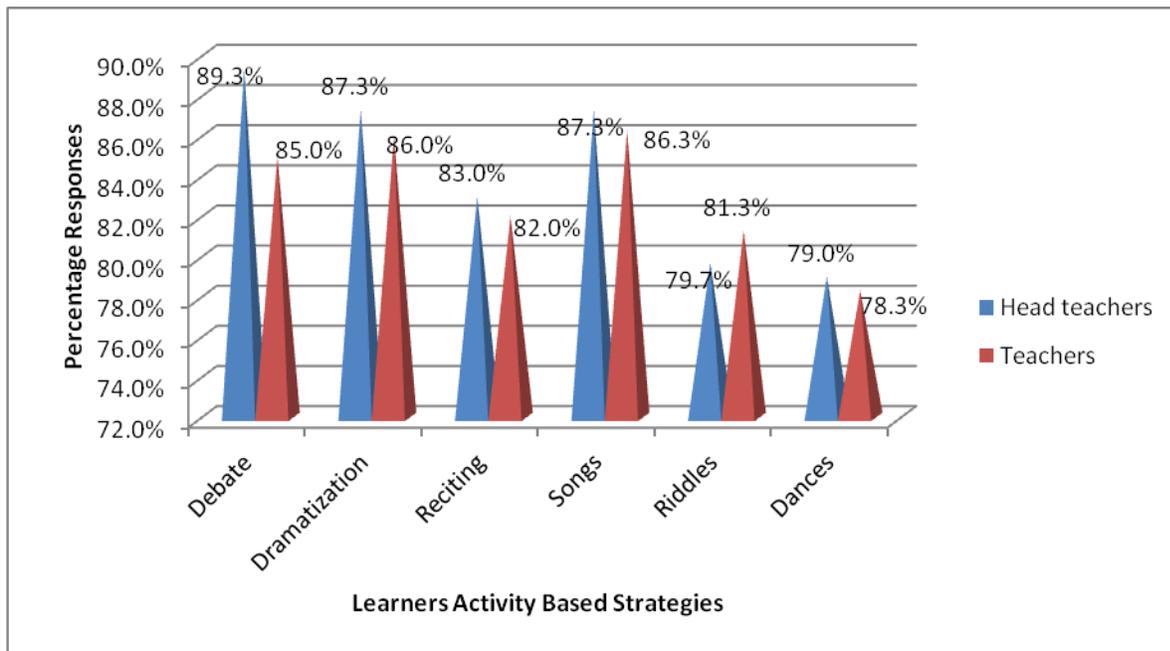
Majority of the primary school head teachers (96.7%) rated experiments high while teachers rated use of demonstrations highly (96.0%). All the same the two approaches were rated highly by over 90% of the head teachers and teachers. This implies that experimentation and demonstrations should be emphasized while delivering the primary school curriculum as a large proportion of head teachers and teachers shows high preference in use of this method. When demonstration and experimentation methods are used to deliver the curriculum, it is likely that important skills will be acquired by the learners hence making them competent in performing some certain tasks in their day-to-day lives. Use of field excursions and projects had ratings of

82.7% and 85.0% respectively by the head teachers and 82.3% and 79.7 % respectively by teachers.

4.5.3 Learners' Activity-Based Strategies

Primary school teachers responded on the extent to which they would want to adopt learners' activity-based strategies of teaching. Their responses are presented in **Figure 4.15**.

Figure 4.15: Head teachers and Teachers responses on the extent to which Learners' activity strategies should be used in delivering the primary school curriculum (N=534)

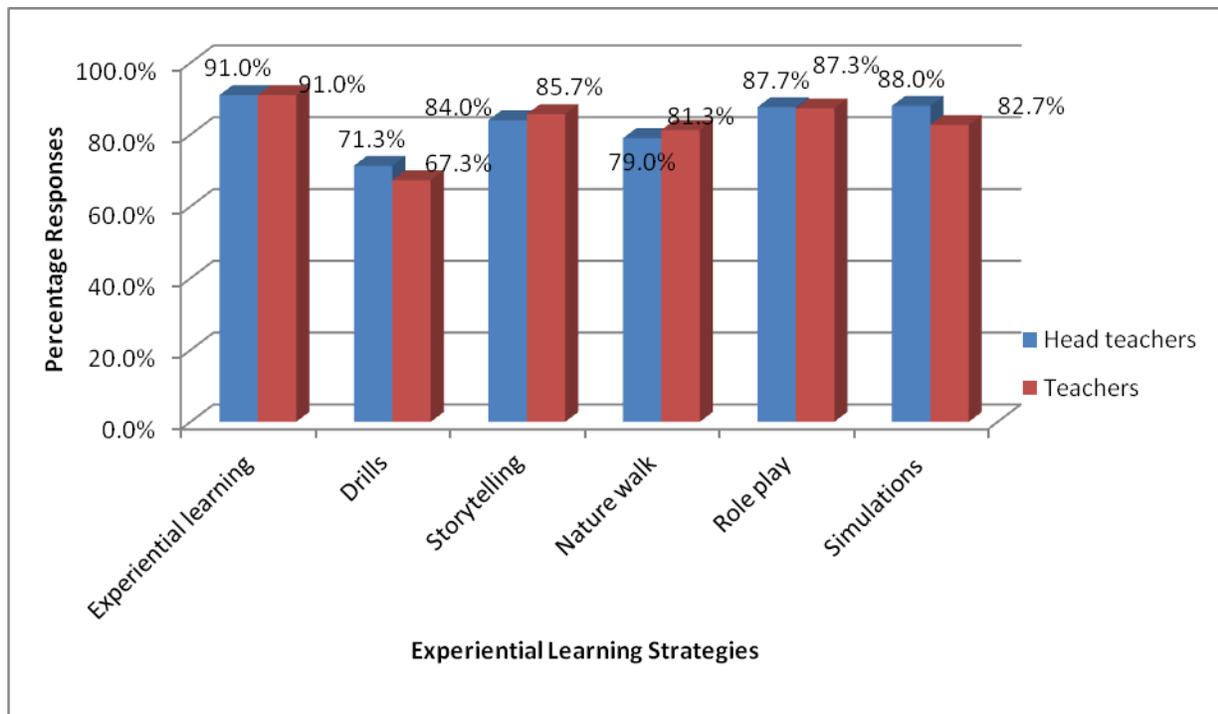


Debate and dramatization featured prominently with ratings of 89.3% and 87.3% respectively by the head teachers while for the teachers' songs and dramatization featured prominently at 86.3% and 86.0% respectively. All the same debate, dramatization and songs were highly rated by over 85% of the head teachers and teachers. This means that both head teachers and teachers at this level highly prefer the use of these three learner-centered approaches. Learner-centred approaches are deemed fit for use in a competence-based curriculum because they provide opportunities for learners to use individualized materials, have flexible learning time and to get continuous feedback from the facilitator. Reciting, riddles and dances had percentage ratings of 83.0%, 79.7% and 79.0% respectively by the head teachers whose ratings were very close to the teachers at 82.0%, 81.3% and 78.3% respectively.

4.5.4 Experiential Learning Strategies

Primary school level teachers' responses on the extent to which they would want to adopt experiential approaches of learning are presented in **Figure 4.16**.

Figure 4.16: Head teachers and Teachers responses on the extent to which Experiential learning strategies should be used N=837



A similar number of head teachers and teachers gave high ratings of experiential learning at 91.0% and this was followed by role plays with a percentage rating of 87.7% by head teachers and 87.3% by teachers. Story telling had a rating of 84.0% by head teachers and 85.67% by teachers. These three approaches were rated highly and it implies that they are fit for use while delivering the primary level curriculum. Comparing the rating given to storytelling by their secondary school counterparts, the rating is higher in the primary level and this implies that teachers at this level would prefer use of the storytelling approach and probably this is due to the age of the learners they deal with. Simulations, nature walk and drills were given slightly lower ratings by both the head teachers and teachers probably again due to the tender level of the learners.

4.5.5: Lecture Approach

The head teachers rated this approach at 61.67% while the teachers rated it at 56.67%. Comparatively, this rating is relatively low. Lecture is one of the traditional methods of teaching where the teacher acts as the “tower of knowledge”. With the technological advancement, learners are able to access knowledge on their own and therefore this assumption that the teacher is the one who knows everything no longer holds. It therefore implies that lecture method will not find a place among the preferred learning approaches if Kenya as a country intends to deliver the competence-based curriculum effectively. Furthermore, lecture method does not promote active participation by the learners during the learning process

4.5.6: Other learning approaches to be used in delivering the primary level curriculum

Respondents were given an opportunity to state any other method that they thought would be used to deliver the primary level curriculum. Other learning approaches as given by the primary school head teachers include giving of assignments, conducting research, competing in answering questions in various schools, conditioning, co-operative learning, drama festivals, virtual tours, peer teaching, question and answer, reading story books, use of resource persons, student facilitation, free play and apprenticeship. The teachers had similar suggestion like those of the head teachers in use question and answer method and making use of resource persons. The teachers also suggested use of case studies, team teaching, observation, e-learning, games and discovery method.

The findings show preference for pedagogical approaches that are participatory, application oriented, practical and based on local resources . In addition, they observed that benefits of the approaches will not be better realized in isolation but must be done through well trained teachers and continuous research.

It is also evident that the expansion and democratization of basic and secondary education has led to cultural, social and individual diversities among learners, (Ainscow and Operti 2012), causing a shift from the traditional teacher-centered learning to student-centered learning. In the observation of (Morin 2011), effective instruction is more allied to active participation which

promotes what can be done with knowledge, instead of passive participation which emphasizes transmission and accumulation of knowledge (as during a lecture).

This shift in pedagogy calls for use of different strategies like exploration, discussion, experimentation and brainstorming to effectively engage learners to acquire requisite knowledge, skills and attitudes. The wide range of conditions for learning and singular nature of each pupil as a special being (Acedo and Opertti, 2012) make it imperative to use relevant pedagogies that promote these 21st century skills and competencies.

Giving more attention to the place of the learners also means that planning for classroom interaction, execution of the plans and classroom assessment practices are constructed from the learners and their needs. The vision of the curriculum reform, “nurturing every learner’s potential” can only be realized when inclusive pedagogies are in use. Those pedagogies according to Florian and Black Hawkins (2010) accommodate the expectations and needs of learners by creating options for them to choose how, where and with whom to learn.

Teachers in Kenya are yet to be well grounded in learning approaches that encourage participation of learners as they acquire desired competencies. This is mainly the traditional teacher- centred methodologies that focus on the teacher that pervade most classrooms. The implication for teacher capacity is for an ongoing teacher assessment programme that compares the teacher levels against their classroom needs. There is need for teacher training to inculcate in-depth knowledge regarding the theoretical and practical application of different pedagogical techniques.

Pedagogical skills are undoubtedly central to the teaching and learning process. However, the emphasis on inclusive pedagogies overlook to a great extent the role of the teacher as the educator and the necessary support for generating quality learning processes (McLean, 2014). This has probable consequences of laying down what the teachers are expected to do without adequately preparing them on the use of effective pedagogical practices for improving the learning process. The imperatives of achieving educational goals should include the provision of qualified, professionally trained, motivated and supported teachers as a priority (UNESCO, 2014b). Another consideration that should be made during the curriculum

reform is the combined strengthening of the teaching role, of the curriculum and of pedagogy (UNESCO,2015) .

4.6 Nurturing the Potential and Talents of Learners

Gifted and talented children are those who are generally thought to be different due to exemplary performance, ahead of their peers. The importance of talents as an option for easing the current situation of unemployment and poverty in Kenya was seen by parents and learners as an opportunity that education can exploit to improve the livelihoods of many citizens.

Parent : We can nurture the talents of students who are not good at class work but they could perform very well in other fields, if we could change the syllabus such that it can accommodate this kind of students, our society could be better off, such that if the student does not continue with his studies he could have something to do for earning after class eight.(**PA-FGD-MGP-LAM**)

The view expressed by parents about nurturing talents gives an opportunity for talented learners to eventually earn a living from what they can do. This was seen by respondents as a viable alternative to the perennial challenge of limited chances for progression, especially among learners who do not attain academic excellence. It is also a possible solution to the challenge of unemployment because an important part of talent development is innovation. However, this level is yet to expanded to ascertain that learners do not lose out on the prospects of their talents due to lack of innovation.

The head teachers, teachers and curriculum support officers were asked to indicate the extent to which various strategies can be used to nurture the learners' potential and talents. According to the head teachers, nurturing of learners potential and talents may be best enhanced through curriculum enrichment and games and sports at a percent rating of 96.0% and 94.9% respectively. Among the teachers, games and sports was the most preferred strategy at a percent rating of 96% with curriculum enrichment coming second at 93.4%, a case similar to that of the head teachers. Clubs and societies received a high rating of 91.6%. There was convergence of views in suggestions of strategies for nurturing the learners potential and talents among the head teachers and teachers.

Also featured prominently as strategies for nurturing learners potential and talents were; special schools for gifted and talented (94.3%), clubs and societies(90.9%), ability grouping and mentorship programs(90.8%), cooperative learning, competition among schools and academic conferences (90.3%) and special needs classes(90.2%).

Cooperative learning, competition among schools, academic conferences, ability grouping and mentorship programs as well as special needs classes were also considered vital for nurturing learners' talents by the primary school teachers at a percent rating of 89.7%, 89.4% and 88.2 % respectively. Early admission to school and; accelerated learning and advanced placement had a lower ranking at 74.9% and 81.4% respectively by the head teachers and 67.8 % and 78.2% respectively by the teachers. Parents also stated that teachers ought to identify talents from an early age and help nurture them. Additionally, parents and pupils encouraged the provision of opportunities to compete with other schools as well as provision of requisite facilities and equipment for sports, drama and Music.

Parents: ...children in standard one and onwards need to be given time to discover their talent...so that by standard 8 they know their talent..that i can sing...i can do Home science and so on. So we have seen that children can be profiled by engaging them in varied activities .yes but also I can also say even exposure..the teacher can help the learners to do a variety of things like take them where people are doing things like making music...making pots.or they can have a place in the compound...a small shade where they can go and paint...or even paint, drama...we need to widen it. (**PA- FGD- JPP-LAK**)

Pupil: ... introduction of them in school. provision of materials availability of talent clubs... practice..... encouragement. competition with other schools....availability of big playing field and facilities.....be given hope. (**P-FGD-NAP-LAK**)

A similar situation was observed from the 33 curriculum support officers who rated the following strategies on nurturing the learners potential and talents as follows ; curriculum enrichment (95.2%), special needs classes(94.6%), special schools for gifted and talented(94%), ability grouping and mentorship(92.8) and clubs and societies (92.2%). This reflects a clear position for the inclusion of these areas in the new curriculum. The other strategies 'which were preferred by the curriculum support officers included; games and sports 89%), cooperative learning, competition among schools, and academic conferences (84.6%) and early admission to schools (84.2%) and accelerated learning and advanced placement at (81.2%).

Curriculum enrichment the most preferred strategy according to Renzulli and Ries, 2009 as it extends the mastery of the curriculum by providing a series of planned activities to reinforce the curriculum content by enriching the learning environment, learning experiences and teaching approaches. It justifies the existence of opportunities that guarantee exposure of learners' talents. According to parents however, an overloaded curriculum was viewed as an impediment to early specialization in specific areas of interest, thus limiting the development of talents. They posited that when children have a few subjects to concentrate on, there is likelihood that their talents will be nurtured adequately. This would also make it possible to clearly determine the pathways that are suitable to what they would be inclined to.

Parent: ... let's specialize early... to add on that, students should not be taking too many subjects and they will just specialize on just few, they should be taught only subjects they will specialize on. I will give an example of India, they have so young specialists on every field because they check on the talents of the student and teach only what is best to nurture that talent.(PA-FGD-MGP-LAM)

Identifying and nurturing the learners potential and talents through curriculum is also critical for the learner's self-fulfillment and for the country to realize economic development and therefore, the envisaged new curriculum should nurture every child's potential. Children blossom through the academic curriculum when sports and arts are integral to their learning environment. As opposed to having many subjects, the idea of having subjects that could lead to the development of talents was pre-dominant among learners. They expressed their interest in subjects like Music and urged that schools should offer them.

Pupil: In music there are many schools there are many talented students in singing and if it is not taught they will leave their talents but if it is taught they will teach themselves a lot about music and when they grow up they will be better musician (P-FGD-MIP-MAK)

In spite of the push for subjects that are relevant to learners' talents, the parents equally reiterated the importance of basic education as a prior requirement. They added that all talents require some form of basic education.

Parent: It is important to allow the child to complete education. Let him finish class 8 na tumsukume amalize form four tu (let us push him to finish form four). When he has class 8 and form four certificate, he will have gained more in education. Furthermore, the child needs basic education even in whatever talent. He/she should be able for example to communicate effectively. (PA-FGD-KAP-MAK)

The findings of the study depict the conceptualization of talents quite broadly to account for what Gagne (2004) defines differently as either gifts or talents. According to this definition, giftedness is outstanding potential while talent is outstanding performance. In this study, the findings on talents combine both gifts and talents as one. The findings refer to identification as the point of recognizing the potential the learner has, what Gagne (2004) calls a gift, while nurturing is the support given to realize the performance, which Gagne (2004) calls talent.

The difference in conceptualization clearly points to educators and curriculum reform to take cognizance of the fact that gifted children may or may not be high achievers. If they are clustered together under the wider umbrella of “talented” as understood by most respondents, they could be ignored and disengaged to become under achievers if little effort is put in unraveling their potential. The talented children on the other hand are marked by outstanding mastery in knowledge and skills in one or more areas. These areas include but are not limited to Mathematics and Science which fall under academic disciplines, sports and visual arts which can be categorized under physical, technical or artistic ability, a category of problem solving ability and creativity and finally, communicative and leadership ability (Gagne, 2004).

To tap on all these, the design of the curriculum in all its intents and purposes must encompass opportunities that are personalized to respond to the learner’s needs. Similarly, there is a need for differentiation at the levels of pace of delivery, the complexity and depth of content being offered and the teaching methodology. It is only by fulfilling such conditions that diversities among learners’ talents will be addressed.

In terms of the depth and engagement with their particular area of interest, interaction with specialist expertise through modeling and relevant facilities is recommended to spur the gifts and talents to greater heights. The curriculum development process is therefore required to keep pace and sometimes get ahead of the learner’s needs. This means that the educational programs may be required to cooperate with communities outside the school to reinforce what the school cannot afford in relation to facilities and expertise.

Currently, the educational programs in Kenya have age brackets during which learners are expected to be in certain levels of education. However, differentiation in paces of learning may

not fit in well with the fixed programs which do not allow for progression of learners whose abilities surpass a certain level. Implications for the curriculum design is the inclusion of accelerated learning programs that take cognizance of the fact that some learners can cover in 3 years, what their peers take 7-10 years to cover.

A prerequisite to nurturing gifts and talents is identification. (Kinyua, 2014), observes that multiple criteria need to be employed to get as much information about the learners as possible. It therefore requires that teachers continuously identify learners who are gifted and talented in the whole process of learning. Findings showed that the task requires involvement of many stakeholders as a way of ensuring that children get support from home and school as their gifts and talents are identified. This implies creating a supportive environment through the collaborative engagement of more than one stakeholder, in the curriculum implementation process.

The new curriculum and by extension schools will have to embed within them strategies that will enable every learner to harness their potential through well-developed learning activities that will lead to the identification and subsequent development of these areas of potential and talent.

For schools, it becomes imperative that they evaluate their systems and to ensure that they accommodate learners who are gifted and talented.

Progress of the identified learners should be monitored to ensure that, the programme is meeting their educational needs. Findings of the Needs Assessment showed that parents proposed that children should be monitored in order to know what is best for them. Kinyua, (2014) further strengthens the position that monitoring is a serious contributing factor to tracking how well talents are being developed. This means that for this to happen and produce tangible results, an important consideration in curriculum design and implementation includes teacher capacity improvement.

To be able to implement the curriculum effectively, teachers' mind sets need to be re-oriented towards differentiation and continuous monitoring, as means of addressing children with varied achievement capabilities. They must be professionally empowered to make distinctions and group learners according to different models like interest or subject acceleration. This will

certainly ensure that learners' interests are taken care of, without being wrongly grouped where they do not belong.

4.7 Learning Resources

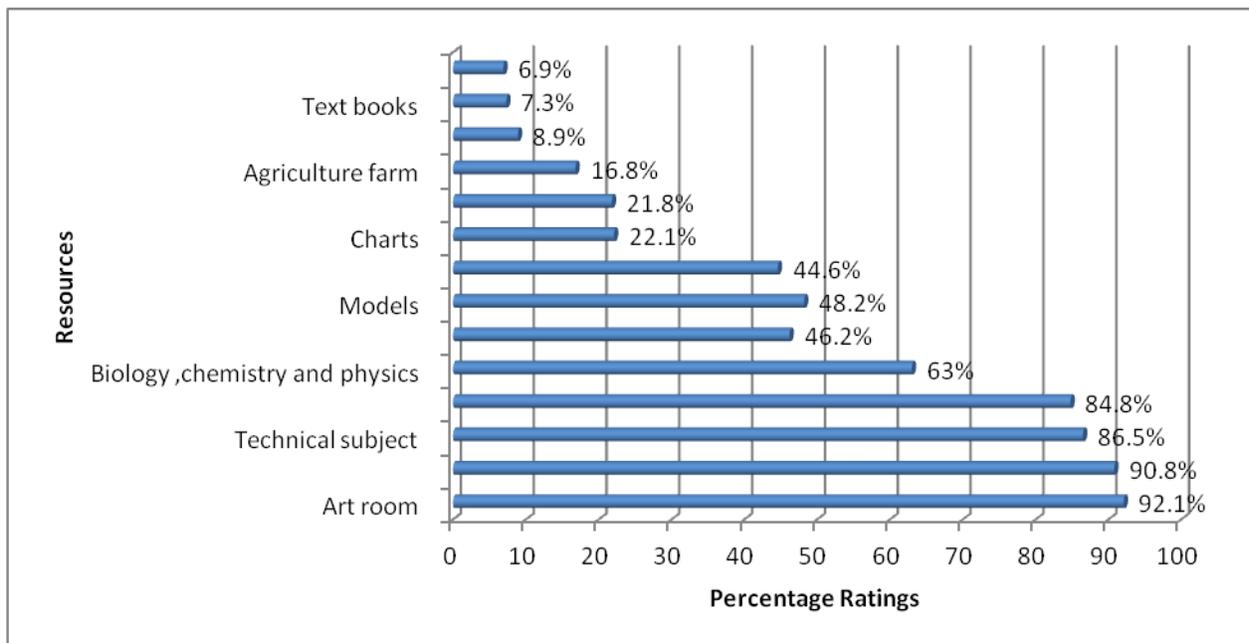
Learning resources are geared towards enhancing learning, teaching and content delivery. Educational resources are the teaching and learning items, structure materials and human resources that assist the teacher to effectively and efficiently deliver content. In recent years there has been a shift among educationists from the traditional teacher-centered learning to student-centered learning. It has been established that effective instruction is more allied to active participation in the teaching learning process (as in laboratory work) than to passive participation (as during a lecture). This shift in pedagogy calls for use of different strategies to effectively engage learners to acquire requisite knowledge, skills and attitudes.

In line with the Education for All (EFA) initiatives, Millennium Development Goals (MDG's), Sustainable Development Goals (SDG), Education for Sustainable Development (ESD), the Constitution of 2010, Sessional paper no 1 of 2015, the realization of Kenya's Vision 2030, of providing a globally competitive quality education, training and research for development, will be achieved through adoption of pedagogy that emphasizes exploration, collaboration, experimentation, creativity, critical thinking and innovation. This calls for the provision of relevant resources that promote these 21st century skills and competencies.

4.7.1 General Teaching and Learning Resources

The survey sort to establish the availability of resources which are important in implementing and actualizing a competency based curriculum. Information was obtained by observing the available resources in the schools. **Figure 4.17** shows the availability of general teaching and learning resources in primary schools.

Figure 4.17: Non Availability of Materials



The findings show that art room (92%), music rooms (90.8%), technical subjects (86.5%), home science (84.8%) and science laboratory (63%) were observed and rated highly as unavailable in the sampled institutions.

In the provision of a globally competitive quality education and training this will be possible through adoption of pedagogy that emphasizes exploration, collaboration, experimentation, creativity, critical thinking and innovation. This calls for the provision of relevant resources that promote these 21st century skills and competencies. But from the discussion above this will be impossible if the resources are not available and even if they are available, they are inadequate.

From the findings, it is evident that learning achievement and overall quality education rely a great deal on in-puts into the teaching-learning process. Contradictions have existed in the last decade between access and quality. It is observed that whereas impressive gains have been made in access, improvements in quality have been slower. This has been mainly due to insufficient numbers of trained teachers, limited infra-structure and inadequate supply of instructional materials, especially among the disadvantaged (UNESCO, 2014).

This focus on resources where priority goes to funding of text-books, teaching materials and equipment is however criticized by Tedesco (1997). He asserts that the investments and

associated goals, with conditions and inputs that support the teaching and learning process limits the function of the curriculum. Instead, a more integral view of education that seeks synergies between input, processes and outcomes is espoused.

In Kenya, the capitation grant has been distributed according to the number of children enrolled. Spending per pupil is often not adequate for resources especially when countries base their allocation on enrolment figures. Watkins and Alemayehu (2012) however fault this procedure pointing out that it disadvantages 12 counties in the arid and semi-arid areas that are home to 46% of the out of school population. This worsens the already bad situation for the learners who are first-generation learners, whose home environments are non-literate. They need additional support in the form of higher spending per pupil.

One of the main aims of the transformational arguments for the inclusive education agenda is to understand, identify and remove barriers that hamper the democratization of education. These include institutional, curricular, and pedagogical and teachers' barriers all of which in one way or another are associated with resources. According to Thomazet, (2009), educational systems should re-think their visions, cultures, policies and practices with a view to reducing gaps in financial and human resources. These proposals resonate with those that have been made for educational reforms in the Kenyan context. They aspire to ensure equitable provision of resources.

4.8 Assessment

Assessment is an important component of improving education. Through assessment feedback can be provided to effect changes that enhance the teaching and learning processes. Primary school head teachers and teachers were asked to respond to the effectiveness and validity of the various assessment forms used in our school system on to determine learners' outcomes. The different forms of assessment were clustered into formative and summative and overall mean rating for each of them calculated. The responses were constructed in the form of a likert scale with "level of extent" being the construct of measurement. Their responses are presented as in **Table 4.1:**

Table 4.1: Head teachers and Teachers responses on the extent to which various forms of assessment contribute to effective measurement of learners' achievements at Primary level

| Formative assessment Percentage rating | | | Summative assessment Percentage rating | | |
|--|-------|----------|--|--------|----------|
| Head Teachers | | Teachers | Head Teachers | | Teachers |
| Continuous assessment | 97% | 95% | End of term examination | 90.4% | 92% |
| Project work | 85.2% | 79% | End of year examination | 88 % | 89.2% |
| | | | National examination | 85% | 83.6% |
| | | | Project work | 85.2% | 79% |
| Overall Mean Percentage Ratings | 91.1% | 87% | Overall Mean Percentage Ratings | 87.15% | 85.95% |

The head teachers' and teachers rated continuous assessment highest at 97% and 95% respectively followed by end of term examination at 90.4% and 92% respectively. The least preferred form of assessment by the head teachers was national examinations which were rated at 85% while teachers least preferred project work at 79%. Other forms of assessments suggested by the head teachers and teachers were aptitude test, assessment of research, co-curricular assessment observation and oral assessment. The learners and the parents addressed both summative and formative assessment modes of assessment with varying opinions. They were of the general view that both types of assessment should be used to assess learning.

Ind......apart from the national exams I would also go for continuous assessment test. There is nothing wrong with this. It will give continuous feedback. And again, the more you are taught at different classes, the more you understand the language of instruction which is very important. **(MAN-IND-MAK)**

4.8.1 Formative Assessment

The finality of summative assessment in determining the grades of a learner was the main reason for preference of formative assessment among respondents. Learners indicated that examinations should not be conceptualized as an end to themselves but as a tool of measuring the extent to which learning has taken place.

Pupil: Pupils should understand we are not coming to school to pass the examination. We are coming to school to learn and to gather skills and knowledge so that we may make our country develop. **(P -BMJP – MUR)**

The parents stated that credibility and comprehensiveness of examinations would be attained by testing learners regularly and using the results for the final assessment grade.

Parent...we need to take regular exams that build up...so you don't do one exam that seals your fate. (PA-FGD-JPP-LAK)

Parent: ...Should anything happen such as sickness this is likely to affect performance. The tests should be national but continuous with marks counting towards the final grade. This is the only time the true performance of the learner can be determined (PA-FGD-KRP-MUR)

The parents underscored the importance of continuous assessment as a way of taking stock of the learners' progress. They asserted that certain factors usually affect learners during the final examinations and interfere with an otherwise good performance. Given a chance through formative assessment, a record of what has been learnt could be availed. Industrialists were also in agreement that best results about the overall attainment of learners would be attained through formative assessment.

Parent: That final assessment is not enough. You might find a child who has been good from the lower levels but might get a time, might be he/she is affected psychologically. This means he is not able to continue performing well. The expectations in the final exams fail. When such a person performs badly, we forget about him or her completely. There is need for learners to be assessed early, such that, in case they get to a point that they relax, we get to know the problem so that we can work together to prevent losing a child. You might have a child doing well from class one, but when he/she gets to class six or seven, they change. This stage could be adolescence. He/she will disturb in class seven, eight, form one and two. On reaching form three, they start being good. If assessed at the middle and the average done, such a person will not get lost. (PA-FGD-MVP-KAK)

Ind...the best kind of assessment would be the progressive assessment... The final exam normally captures some kind of a drill program. It focuses on the final lap but the one capturing step by step would be better provided its more inclusive of content. (MAN-IND-KAK).

Formative assessment was additionally perceived as a fair way of appreciating the varied learning styles among learners and recognizing individual differences among them. The opportunities offered by assessment allows for the use of observation as a measure of ascertaining the extent to which learners can practically demonstrate what they have acquired through theory lessons in class.

Ind:the best way is to assess these students on what they have learnt, because students have different avenues of learning, there are some who are talented, they can memorize it in short time there are others who will take a lot of time and when they grab the information they are okay with it. What should happen is to assess progressively. For example if it is subject that the student is doing there should be a CAT that the student does on the subject that they have been taught also they could put the practical aspect in that a teacher might have taught a certain lesson but he or she should be put in real life so that they try to solve the same problem in a different manner in such a way, a teacher will be able to gauge and assess if the student has got the concept or not. There should be a progressive way to test students. (CEO-RIV-UG).

Parent...think if we could do school based exams with most being practical ...so they are assessed on practical skills along with written...this may be credible. So that we can see you doing it yourself. (PA-FGD- JPP-LAK)

Respondents added that formative assessment gives continuous feedback about learners and builds their capacity to understand the language of instruction .This helps them to learn better by really internalizing that information. Additionally, it would discourage rote learning.

Ind: apart from the national exams I would also go for continuous assessment test. There is nothing wrong with this. It will give continuous feedback. And again, the more you are taught in different classes, the more you understand the language of instruction which is very important (MAN-IND-MAK).

Continuous assessment was also credited for its ability to evaluate all aspects of learning such as academic work, behavior and talents. Parents were of the opinion that such assessments provide a holistic representation of the learners' attributes, including values.

Parent: In my view assessment should not be pegged on one final examination, more so, talents, attendance, behaviour can also be examined and this will encourage learners to work hard in all aspects. (P-FGD-SJP -BUN).

Parent: I think it could be better if there is evaluation to test children if they have passed especially in values, may be standard four exam time and then standard eight that would be best. (PA-FGD-MGH-USG)

From the parents' observation, continuous assessment would be useful in allowing for placement and progression of learners along different interests and pathways. The idea of termination of learners' education because they had not succeeded through the traditional summative assessment was found punitive and discriminatory. A situation was envisaged where examinations will lead to the fair treatment of learners from both public and private schools during the allocation of places in secondary school.

Parent: it can start from primary and secondary. But this testing should not be used to terminate the education of the child. It does not mean those who do not do well in the test are stupid. They also have their potential... It would be better if we had people assessing those who are able to make baskets and allow them to pursue that line. (PA- FGD-UNP –MAK)

College student: Give equal opportunity to private and public schools to join schools in secondary school. (CS-FGD-NTC–NAR)

Though the findings show that respondents seemed to agree on advantages of formative assessment, some parents however, raised concern about the integrity in regard to school based

formative assessment. They perceived school based formative assessment to be subject to easy manipulation through biasness, corruption and favoritism.

Parent: ...well the question of honesty may still make school based exams even worse! (PA- FGD- JPP-LAK)

Parent: one if we do it annually it may come back to the teachers who are teaching that school and my worry to the teachers teaching same school is that they tend to favor their own students and that is why they are even tempted to cheat for students so if you use that as a tool of assessing the students may be everybody will be any achiever (PA-FGD-MGS-USG)

To improve the credibility of assessments administered in schools, parents were of the opinion that school based assessment should still be managed by authorized institutions like KNEC, to minimize on instances of favoritism by teachers administering these assessments in their own schools. They came up with a suggestion that national examinations should be done at the end of every class or standard 4, 6 and standard 8. They went further to state that the marking of these examinations should be carried out by different teachers who teach other classes. They also said that there should be anonymity in the identification of learners, using random numbers. Another suggestion was for the learners to do a general paper to assess their understanding of contemporary issues. Parental participation in following up the daily assessment of their children was also suggested.

Parent : my suggestion would be this, assessment institutions that we have in this country especially KNEC should be given a proper mandate to conduct various forms of assessments, not just academic but they can do other different forms under that cycle and they make it official that this time we do particular assessment. (PA-FGD-MGS-USG)

Parent: The parent must watch the child and his/her school work daily (PA- FGD-WAP –KWA)

Beyond individual schools, another mode of formative assessment suggested by the pupils involves inter- school competitions to assess if pupils are learning. These could be organized in terms of monthly examinations per zone or district. Debates, speed tests and inter-class questions with other schools were among the preferred forms of assessment at the primary level.

Pupil: For example, when there is a maths contest or a science contest, those ones help to know if the children are reading and understanding well. (P-FGD-TRP-NYE).

4.8.2 Summative Assessment

The importance of summative assessment was expressed by some respondents who viewed KCPE as an examination that is useful for the placement of learners to secondary school, which

is the next level of progression, after primary school. The examination, according to parents, helps to determine whether or not learners were working hard during the eight year duration in primary school.

Pupil: ... there is no other way. And if you fail it means you didn't learn anything from class 1 up to 8 and you were never serious....(**P-FGD-BUP-LAK**)

The preference for summative assessment was also based on the view that it was critical for ensuring that equality prevailed. As a national examination, KCPE was in this case recognized as being more credible, compared to school based CATs given the controls put in place during its administration. Due to widespread copying during administration of CATs, parents commented that KCPE is well set and treats learners equally.

Despite the support for summative assessment, the findings show that respondents also suggested that the continuous assessment marks should count towards the final KCPE grade. Pupils and parents expressed the view that summative evaluations by themselves may not give an objective evaluation of what the learners shall have learnt at any one given level. They encouraged secret setting of examinations to limit the loop holes in examination leakages.

Pupil: because we have heard many cases of pupils stealing KCPE the best thing is they bring out the KCPE papers the child does but they must remember other exams which they did in those exams the pupils did not steal they must take all the marks for the whole term and take the average then add to KCPE that way they will be true evidence that the pupil didn't steal the exam. (**P-FGD- NGP- MAK**).

Respondents suggested that summative assessment could be made more meaningful by improving the examination format. Parents and learners faulted the use of multiple choice items. They preferred structured to objective questions which they agreed could lead to guess work. With regard to establishing the extent of learning achievement, parents proposed the use of structured tests. These, according to them had the advantage of helping to determine the ability of learners to express themselves in writing.

Parent : on exams, some students use guess work on this national exams, let exam have some explanations rather than multiple choice so that a child can read and understand before attempting the examination, like the way secondary is done, let primary be done the same. There is no need of doing away with these exams (**PA-FGD-MGP-LAM**)

The need to broaden the parameters of assessment was also emphasized in connection to summative assessment. The respondents suggested that in addition to written examinations, there

should be practical components in final examinations which would give learners a chance to excel in other areas apart from the cognitive dimension.

Parent: There should be practical examinations even at the primary level so that individuals' talents can be identified. Because writing of examinations is not the answer, there could be some people who have gone through class one to standard eight and they do not know how to read, but in the farm such a person is number one. So if evaluated on farming, the person will become number one. But in written examination they may become number one, but it will be understand where their talent is. **(PA-FGD - MVP -KAK)**

In view of the challenges associated with summative examinations alone, it is apparent that respondents suggest a certain method of assessment that takes into account progressive tracking of learners' attainment and also providing a national comparison of learners' performance.

Ind:..There is need to marry the two because normally those continuous assessment will say what a student was some years back but it is important to know that there is development and the time they are leaving the institution the person have developed...**(MAN-IND-KAK)**

From the findings, it is evident that the need to uphold the place of learning still remains paramount in the face of arguments for or against the types of assessment to be administered in the curriculum. The findings are aligned to the argument advanced by Stein, Dawson and Fischer, (2010) .They state that formative assessment should not be discussed as opposed to summative assessment. Instead, they both should be viewed as complementary tools that have a duty to support the learning process. It is however noted that the practice in Kenya in the recent past has reduced learning to what goes to outcomes. Atkin (1999) recommends that assessment should promote and motivate learning processes, with an emphasis on using the outcomes to improve the quality of the processes.

The findings in the survey show that assessment that is usually carried out in primary schools in Kenya does not reflect a comprehensive attainment of the learners. The concept of multiple intelligences (Gardner, 1998), and long term attainment of the learners are excluded in the current curriculum implementation and assessment practices. There should be theoretical justification for teaching environments and teachers who can offer opportunities for a wide array of assessments, that foster cognitive and non –cognitive competencies.

The consideration of learners' performance based on summative assessment alone, while excluding their individual and diverse needs jeopardizes objective judgment of performance.

This implies more targeted and relevant modes of assessment that provide a more balanced and holistic understanding of the learners' progress in various abilities.

4.9 Contemporary /Emerging Issues

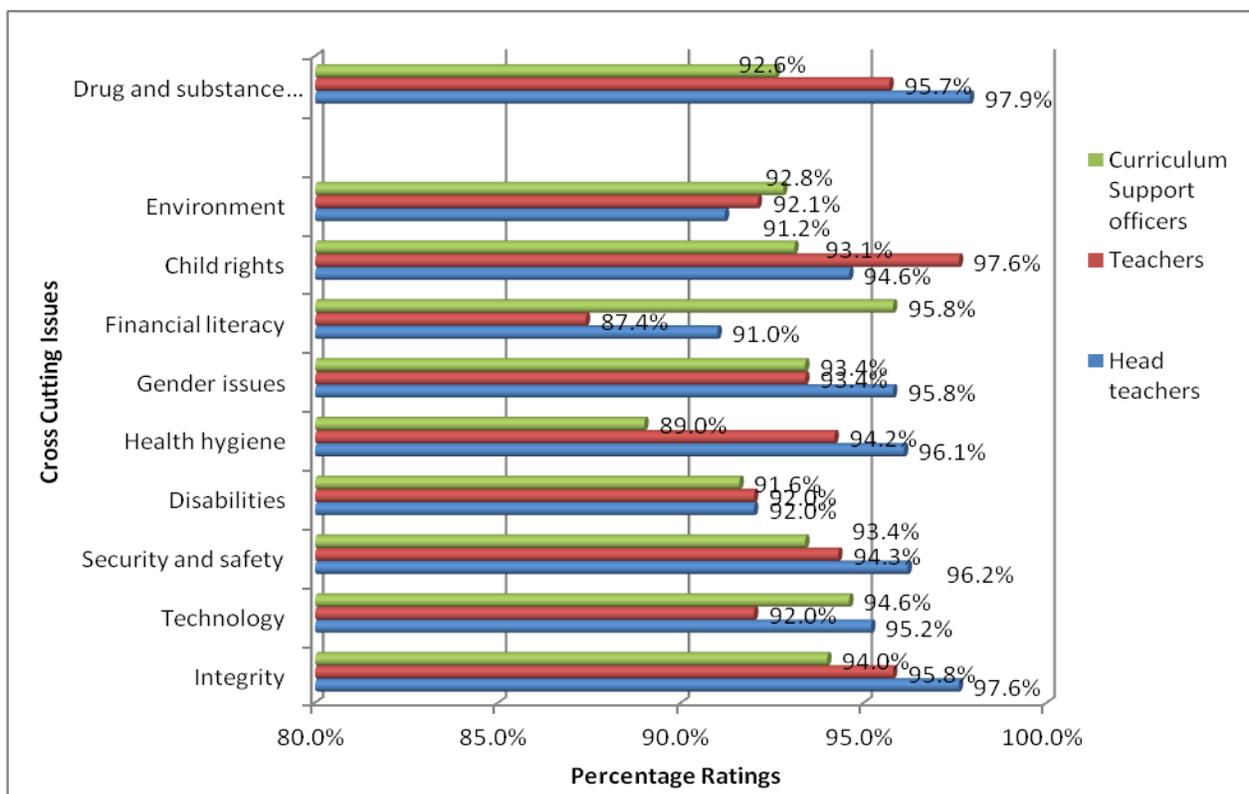
Cross cutting issues are matters that touch a number of different aspects of the society, on general principles such as democracy, human rights, good governance, children's rights, gender equality, population and family life education, poverty alleviation, environment and development, to mention but a few. Cross-cutting issues are commonly defined as topics which, by their very nature, have a strong impact on all operations in a given field and, therefore, must receive special attention hence their inclusion in the intended new curriculum. These issues cut across all the levels of education. Hence they need a lot emphasizes in the future curriculum. To address crosscutting issues and also to make learning meaningful, hence to enable learners develop deep understanding of what they learn, teachers need to use participatory and cooperative teaching methods. Participatory and cooperative teaching methods help learners develop critical thinking, reflect on their own situations and get insights of their own situations.

The various cross cutting issues were identified from different policy documents such as: Kenya constitution 2010, vision 2030, Education for Sustainable development (ESD), Child Act (2001), Millennium Development Goals (MDGs), Sustainable Development Goals (SDGs), Sessional paper no 1 of 2015 among others. Each of these documents emphasizes different aspects of the cross cutting issues and education has been identified as the wheel to nurture them among the youth.

The Constitution of Kenya 2010 is the supreme law of Kenya and gives more clarification on the direction education should take in several chapters. Chapter 2 and 6 deals with principles of governance, leadership and integrity; chapter 4 deals with bills of rights which include child rights; part 2 deals with environment; part 3 deals with specific application of rights like children rights and persons with disabilities; chapter 5 part 2 deals with environment and natural resources; chapter 12 deals with national security. All these are cross cutting issues and if they are not in cooperated in the future curriculum, it will out rightly be declared unconstitutional.

The other cross cutting issues like technology, health issues and drug abuse are emphasized in the blue print of developing the country to a middle level economy, the Vision 2030. A few of the cross cutting issues have been included in the current curriculum but in the envisaged curriculum, they need to be emphasized. The primary school head teachers, teachers and curriculum support officers were required to rate the extent to which various cross cutting issues should be emphasized in the envisaged primary school curriculum. Their responses are presented in **Figure 4.18**.

Figure 4.18: Head Teachers, Teachers’ and Curriculum support officers responses on extent to which various cross-cutting issues should be addressed in the primary school curriculum.



On average 94.8%, 93.4% and 93.0% of primary school head teachers, teachers and curriculum support officers respectively affirmed the need to have cross-cutting issues addressed by the curriculum. The highest rated cross-cutting issues was drug and substance abuse by 97.9% of the head teachers, child right by 97.6% of the teachers and financial literacy by 95.8% of the curriculum support officers. The least preferred cross-cutting issue by the head teachers was environment at 91.2%, financial literacy by teachers at 87.4% and health and hygiene by curriculum support officers at 89%.

4.9.1 Drug and substance abuse

The mention of drug and substance abuse by head teachers as an area that requires mitigation is mainly due to its negative impact on a large population of the youth, who hold the promise for the future. Learners added that the challenge of alcohol abuse had also pervaded primary schools with peers influencing each other to leave school.

Pupil: Rafiki zake ,wanamwambia aache shule akakunywe pombe.(**P-FGD-KEP-NYM**)

Pupil: Friends, tell them to leave school to go and drink alcohol.(**P-FGD-KEP-NYM**)

They noted that irresponsible consumption of alcohol was destructive to professionals like lawyers doctors and called upon the authorities to ban it.

Pupil: Like in Kenya we have very many lawyers, doctors, lecturers..... who are down here because of the alcohol. They should ban totally”. (**PL-SOP-USG**)

Parents in a rejoinder indicated the serious negative effects that alcohol and substance abuse bear on both the individual and society, and the need for the curriculum to address these issues alongside peer pressure. Worth noting, is the association of insecurity, murder, Alshabaab insurgence, HIV and as well as early pregnancies, to the abuse of substances. The magnitude of danger posed by the use of drugs is therefore significant because it impacts on personal health, social and economic well being.

Parent: When we talking such issues to me, my opinion these things such as Alshabab are here in different families, HIV and Aids, drugs, Miraa... children killing their own parents, because the child has taken drugs, this is brought about by the people selling these drugs and the government knows them. (**PA-FGD-MAP-KWA**)

The respondents singled out the coast region as a hot bed for drugs. In terms of approach, the provision of adequate trained staff and counselors to meet the shortfall currently experienced in schools would alleviate the challenge. The experts would provide the much needed individualized attention and mitigate risks associated with substance abuse that threaten the society as a whole.

Parent: we should have retrained teacher counselors who are not less than three to do the work effectively. In the environment we should have people outside to counsel our pupils, outside counselors should be training those who are outside to stop taking drugs, counselors inside should train students about what will happen to them if they start taking drugs. All educational levels should play that role of ensuring that students grow morally upright, let them be properly motivated. Like in European schools every school has many counselors, fewer lessons and every student should be well attended personally and after may be a month some changes will be seen on that child. So we will be moving together (**PA-FGD-MGP-LAM**)

There was also the need for a multi-pronged approach, at home, at the school level and at the national level. Learners observed that some responsibility to make a change lies with the parents.

Pupils: the parents should monitor their children and take care of things like phones. **(P-FGD-HPP-KIL)**

The parents stated that all subjects should support the fight against drugs and other contemporary issues in society. It is however evident that these initiatives are already in place and could be stepped up to bolster the efforts already in place.

Parent : they should be taught subjects which could be of help them, although this one is not taken seriously. If we talk about drugs, we have a lot of topics in science so if it's possible it should be given more time or have something we call interdepartmental, they should interact well and everyone do the work effectively, things like gender violence, early marriages let them come to the world, we have this people who do just do one task and after that they sit on the staffroom doing a lot of nothing. It is time for administrators to do their job and fire them. All government resources should be geared towards these contemporary issues. So the ministry should strategize and solve the problems of common people on the ground send specialists to solve specific issues e.g. gender violence we should have a person specialized for that, security officers to check on responsibility of parents, if all this departments will integrate and work together then in three years we will have total change in Kenya. **(PA-FGD-MGP-LAM)**

At the national level, the suggestions for a multi-sectoral approach was viewed as a rapid solution to the myriad of contemporary and emerging issues in society. The parents suggested that specialized personnel are allocated duties that are relevant to the specific underlying problems in the society. In their view, the blame should not just be targeted to the children taking drugs. The peddlers should be arrested as well.

Parent : we should not only be blaming our children for taking thing like drugs, those drug smugglers and peddlers should be arrested first, those who are selling too should also be arrested, 'like in coastal region we are highly affected because our Men are not performing their responsibilities because of this drugs, they are marrying like four wives and every day they are fighting. So what do you expect the children to be doing? Children become psychologically affected, Women marrying each other. **(PA-FGD-MGP-LAM)**

It is clear from the findings that awareness on the long term consequences of abusing certain drugs and substances can be increased through education. According to WHO (2013), this is true especially in reference to the low and middle income countries, Kenya included, where consumption of tobacco products is increasing. In its formulation of National Goals of Education, Kenya put into consideration a component of health and environmental protection, in recognition of the positive impact that education could have in alleviating health related challenges. The goal intends that learners “Embrace positive attitudes towards good health and environmental protection”, (KIE, 2008). In addition, the Government has instituted NACADA to coordinate activities of eradicating the drug menace in Kenya. In spite of these initiatives, drug-related challenges that interfere with the overall well-being of citizens still abound.

The findings do not however solely acknowledge the place of education as a solution to the drug problem. It is apparent that there are many influences that lead to the use of drugs in the country. Joint efforts must therefore be put into action, to include other interventions beyond education. It is only through such efforts that the magnitude of danger posed by the use of drugs can be reduced, across the broad spectrum of personal, social as well as economic well-being of citizens, especially the youth.

4.9.2 Child Rights

Teachers brought out children's rights to the fore as a key factor that impedes education at the primary school level. They outlined child labour as one of the incidences of inequality that led to exclusion of children from schools. Pupils and parents acknowledged that some children make little money by doing menial jobs like grazing cows while others get good payments from picking tea. Engagement in these economic activities, alongside other violations of children's rights like sexual harassment were among the major interferences with education.

Parent: Child labour is also a factor that contributes to failure of pupils to learn. Orphaned children are left with people that expose them to child labour like fishing, becoming house girls ...sexual abuse like guardians, step parents abuse some of the children and this makes the life of that child very difficult. In some schools some of the male teachers take advantage of the children. **(PA-FGD-MIP-HOB)**

Parent: The issue of money is more emphasized than schooling. For example in our area it is a tea zone there is a tendency of people failing to continue schooling because tea is well-paid. **(PA-FGD-KRP – MUR)**

Other factors that limit equal learning opportunities were manifested in gender biases like early marriages, Female Genital Mutilation (FGM) and sexual harassment of the girl child. They also raised concerns that the girl child seems to be favoured over the boy child. These were also condemned as practices that prohibit learners from continuing with their education and deny them a future. The learners strongly expressed the need for cases of sexual harassment to be dealt firmly.

Pupil: Female Genital Mutilation should be eliminated so that girls can have chance to make their future and go to school. In most of the primary schools, the government should strictly address the issue of sexual harassment. **(P-FGD-HPP-KIL)**

Child marriage accounts for a total of 2.9 million girls in sub-Saharan Africa and South and West Asia (UNESCO, 2014). This accounts for one in eight girls in sub-Saharan Africa. According to analysis for this report, provision of primary education has the capacity to avert child marriage by 14%, from 2.9 million to 2.5 million in sub-Saharan Africa and South and West Asia. If they had secondary education, it would fall by 64%, to just over one million. This evidence proves that access to primary education and subsequent reductions of bottlenecks that reduce transition to secondary education certainly help girls to overcome forms of discrimination that inhibit their progress. The proposed reform entails a seamless transition across the primary and secondary school levels.

Parents decried lack of uniformity in the provision of education to learners as a result of poverty, lack of supervision of the learning process as well as inequitable distribution of facilities. They noted that some schools without facilities were judged on the same platform with those that are well equipped at the end of the year. They affirmed that poverty was a hindrance to acquiring education.

Parent: One of the issues affecting the learning is poverty. Besides having free primary education some pupils still are unable to attend school. The little money asked by school the parents are not able to raise. So poverty is a major problem. (PA-FGD-MIP-HOB)

According to Bergh and Melamed (2012), the poor people view education and jobs as the two most important ways to improve their well being. Whereas it is clear that education reduces poverty and increases economic growth (Hanushek and Woessmann, 2012b), the possibility of this change still remains a dream for the very poor in society who do not get good quality of education as revealed in the findings. Reduction of inequality in education is the only way of ensuring that chronic poverty is banished in societies. Evidence from countries like China, Republic of Korea and Taiwan Province of China shows that the high levels of economic growth that they have experienced is as a result of reducing education inequality (UNESCO, 2014). Equitable provision of education is therefore a prerequisite to the reduction of poverty, a form of social inequality that denies children rights like access to quality education.

4.9.3 *HIV and AIDS*

Concerns for good health and hygiene were discussed in relation to the prevalence of HIV and the need to provide love and support to both the infected and affected. This was among 96.1% of the head teachers. Lack of medicine for those affected learners was cited as an issue affecting learning. Parents felt that there is need to teach learners about HIV and AIDS in carrier subjects such Social Studies and Science.

The idea of using the school curriculum to teach learners about HIV and AIDS in carrier subjects such Social Studies and Science is not entirely new because it has been practiced in Kenya. However, there are still myths that associate having sex with a virgin, with the cure of HIV. Such myths should be addressed by the curriculum as they contribute to new infections, which need to be reduced. In a study that analyzed 26 countries in sub-Saharan Africa that account for about half of new infections among adults, it was evident that literacy skills are critical for improving levels of knowledge of how HIV is transmitted. It went further to show that in sub-Saharan Africa, 91% of literate women know that HIV is not transmitted through sharing food, compared with 72% of those who are not literate (UNESCO, 2014). The findings show that there is still room for the curriculum to be used to reduce new infections. This would especially be useful where certain myths associated with HIV still exist.

4.9.4 *Environmental Conservation*

The need to address environmental issues in the curriculum to was highlighted by 92.8% and 92.1% of curriculum support officers and teachers respectively. Learners were conscious of the obligation to meet expectations of sustainable development. They observed that being taught how to keep the environment clean develops in them a sense of responsibility.

Pupil:..When you have been taught on how to keep the environment clean, and on the compound there are some papers, you will be able to collect them and put them in a bin and maintain cleanliness,.(**P-FGD-BUP-LAK**)

The learners also seemed aware of the pressing environmental challenges. They could easily identify with the day to day occurrences that interfered with environmental conservation. Key among them was noise pollution. Schools located near the road are affected by noise from cars, lorries and motor bikes. Learners raised concern that noise pollution affects them as they travel to school and back home.

Pupil: It is the bike and the cars and the lorries which make a lot of noise it really affects our education (**PFGD - OPP-USG**).

Parents indicated that pollution from industries affects soil through acidic rain. They raised the issue of environmental degradation through poor waste disposal.

The findings also show that learners are knowledgeable on terminologies like “environmental conservation” and “global warming”. They identified pollutants as wastes emptied into the rivers and use of aerosol sprays. They observed that certain factors either impacted or were impacted by the environment negatively brought challenges to education. These include growth of slums, harsh climate, water shortage, dirty environment, dirty toilets, blocked sewage systems and poaching of wild animals. In addition, the learners suggested interventions that could help reduce these adverse effects of poor environmental management. A pupil suggested communal clean-ups and a forestation to manage the environment.

Pupil: They can be told not to cut off the trees because when we cut them the environment will not be good and we shall lack a lot of things. So we can try as they say when you cut one plant two. So if you cut it plant another one. (**PL-FGD-KRP-MUR**)

The problems associated with environmental degradation do not seem to stem from ignorance among the learners. Through education, they have been familiarized with the risks of not undertaking actions towards saving the environment. The gap between what there is and what should be is as a result of lack of positive environmental attitudes and behaviours.

Pupil: “We have been taught how to keep the environment clean but up to now I never understand why we keep throwing wrappers of food stuff everywhere” (**PL-SOP-USG**).

The failures of the common models for teaching environmental education could be in their inability to embrace whole school approaches that use practical demonstration of sustainable living to reinforce learning (Choi et al, 2013). This view is also advanced by the Eco-school initiative in South Africa which provides certification for schools that link environmental action and learning. Success stories of the initiative include schools that practice hands on teaching and learning approaches while linking the curriculum to practical actions like recycling systems and water harvesting (Wildlife and Environment Society of South Africa, 2013). In Kenya, the positive behaviour change towards the environment can happen with a curriculum that has practical linkages with environmental issues that affect the nation. Learning about the

environment should not be done in isolation. It should be reinforced with situations that are meaningful to the improvement of the environment.

4.9.5 Technology

Head teachers and curriculum support officers underscored the relevance of technology in the digital era, with responses among head teachers at 95.2%, while curriculum support officers responded at 94.6%. In spite of this, the high responses, there are misgivings about the emerging issues in technology, including misuse of such resources. Pupils who are the main culprits in improper uses of technology were in agreement and suggested that appropriate use of technology should be included in the curriculum in order to avoid over-indulgence at the expense of learning. Pornography and spreading hate speech were some of the common uses among youth and teenagers.

Pupil: Parents should not give their children phones because sometimes they cannot sleep because of use of calls they make to other people..... (P-FGD-MAP-NAR)

The parents indicated that the curriculum should address issues on electronic media by reversing people's current pre-occupation with issues that are not necessarily helpful to the learners.

Parent: it is as if our society wake up in the morning we eat politics and in the evening we still eat politics and sleeping with politics... There are some current issues should be talked about on air, like education. We have come up with things like internet, Facebook, phones are there nowadays even when you go to matatus everybody is just talking to the phone ... I don't know where we will be as far as much we want ICT we are also destroying the society and our children (PA-FGD-RKP-HOB)

Deploying technology in education is a means of facilitating learning. The proven benefits in the use of technologies lie in those that have the potential to support classroom teaching like interactive radio and television programmes (UNESCO, 2014). The growing popularity of computers and portable electronic devices should not be perceived as a means of replacing classroom teaching. Learning outcomes can only improve when teachers are trained to make the best use of the technologies available and when learners have better access to them within and outside the school. There should also be control measures that prohibit learners from using (ICT) in destructive ways that may lead to undesired social behaviours.

4.9.6 Insecurity

Parents raised concern about the issue of insecurity in the country and how it impacts on education. In areas where there are conflicts as a result of different ethnic communities, parents observed that their children are unable to learn well. They said that the cause of discrimination was because they come from a different place or they may be from a different ethnic community.

Parents: There are communities around ...Some communities have tribal clashes and those tribal clashes affect the children going to school and they are not able to learn, they feel that there is no security in the schools. (PA-FGD-BPP-KAK)

Similarly, insecurity also came about due to terrorism and radicalization. Pupil leaders observed that teachers from other regions were not willing to teach them and risk their lives. Many of their schools were therefore under-staffed.

Pupil: There is lack of security. Most of the teachers go. Like those who are non locals have gone away. The children are left alone. So I think many teachers should be increased in schools also the facilities. Nationhood (PL-FGD-AFP-GAR)

Both the learners and their parents were in agreement that tribalism, terrorism and radicalization were the causes of unnecessary conflicts, killings and social discrimination. As a way of dealing with the issue of insecurity, pupil leaders suggested teaching about nationalism and national cohesion. Parents pointed out the need to sensitize the young people against feeling like heroes in doing what is wrong. A lasting solution to this challenge according to parents is the creation of employment opportunities.

Parent: ... They end up in some criminal activities, such as terrorism and other activities. You see our children are involved in that area because they don't get employment. You educate the child, he completes secondary, you pay school fees, they go to university. After finishing the university, there is no job... we want it to develop positive attitudes so that our learners are not involved in terrorism and radicalization ... there is social unrest in our area. People will say...“Tonight will I sleep, should we be comfortable at night today, Are we going to be safe in school?. (PA- FGD-KAP –MAN)

The findings above indicate that the provision of an education that can be translated to some gainful engagement can arrest ethnic or religious intolerance in societies. UNESCO (2014) affirms that when education promotes growth and employment, the incentives for disaffected young men to engage in armed violence is dampened. In accordance with the associations that have been made between education, employment and conflict, it is foreseeable that education is a reliable channel for impacting positively on ingrained attitudes. More on the vital role of education in solving problems related to intolerance is evidenced by Huang et al, (2009) who

observe that one year of schooling increases the probability of trusting people by 2.4%. This then implies that schooling contributes to harmonious co-existence by reducing mistrust.

Though the issues have been raised as having an effect on Kenya as a nation, many of them are not peculiar to the Kenyan context alone. They have already been singled out to receive global attention through consolidated efforts of the Sustainable Development Goals (SDGs), which are slated for achievement in the year 2030.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the key findings of the Needs Assessment Survey of the primary school level. The conclusions drawn from the findings of the study have also been presented. Based on the conclusions, recommendations have been made.

5.2 Summary of Key Findings

The need to perpetuate patriotism dominated responses by the head teachers (95.1%), teachers (95.8%). Discussions with learners and parents also called for the reduction of ethnicity and disunity in the country. Issues of Environmental degradation as well as corruption and insecurity were also highlighted among the general needs of the society. In the area of competencies; those that make learners adaptable to the 21st century took the lead. Similarly, the findings revealed the need for competencies that develop self-reliance, self-care and personal development. Values of honesty, humility and love were proposed for inculcation. Among critical learning areas brought out by the findings were those with the ability to raise levels of economic empowerment at the individual level and also contribute to the overall economic development. Content that is suitable for education in the 21st Century like Critical thinking, Communication, Collaboration and Creativity were also cited as important, with a high ranking above 90%. Others were Mathematics, Languages, Sciences, ICT and Entrepreneurship. Findings of the study elaborated on pedagogies that are more allied to active participation which promotes what can be done with knowledge, instead of passive participation which emphasizes transmission and accumulation of knowledge. In the area of gifts and talents, identification and nurturing can only happen when there is differentiation at the levels of pace of delivery, the complexity and depth of content being offered and the teaching methodology. In terms of resources, the study found out that equitable provision of trained teachers, infra-structure and supply of instructional materials were yet to be attained in primary schools. More findings show that lack of integrity in assessment and narrow parameters are main causes of dissatisfaction with the summative assessment of primary school education in Kenya. Finally, on contemporary and pertinent issues, findings show that

drug and substance abuse, contravention of children's rights, forms of social inequality and HIV and AIDs, are among the social challenges with far reaching consequences.

5.3 Conclusions

5.3.1 General Societal Needs

Drawing on the findings provided on the general needs of the society, it is evident that ethnicity and disunity, environmental degradation, insecurity, as well as economic and industrial development are some of the key factors that characterize the needs of the society in Kenya. The findings further demonstrate inter-relationships between the various dimensions of the needs in society. Social development depends a lot on a corruption free environment where leaders exhibit integrity. Similarly, security and peace would spur economic development. It was clearly demonstrated that certain social challenges like insecurity and drug abuse were often related to poverty. The centrality of education in accelerating the pace of achievement of these needs is still recognized. There is however a disconnect between societal needs and education that is offered in Kenya.

5.3.2 Competencies

An important basis for making decisions on options for competencies in a curriculum is focusing more on how knowledge, values and attitudes that can be used, rather than just their acquisition. It is concluded that there is a desire for primary school curriculum that incorporates competencies that create humans with capabilities for their real life contexts and the global community. There is an emerging trend inclined towards generic non-domain specific competencies such as critical thinking and problem solving, creativity and learning to learn. Included are also cross-curricular topics like global citizenship, sustainable development and inclusion. The current instructional practices and limited resource provisions are a hindrance to competence based curriculum which requires situations that can build the expected competencies. The findings show that curriculum in its current state does not offer enriched content and processes, that are engaging to create and transform the learner into a person with competencies that are in tandem with the ever changing national and global contexts.

5.3.3 Learning Areas

The findings show that achieving content that would satisfy needs of most learners ideally rests on providing a broad base that gives the learners an opportunity to choose and have a niche in their areas of interest. That opportunity must also be largely aligned with preparing the learner for further studies and skills for adult life. Through such an approach, together with a rigorous, high-quality experience, learners will acquire knowledge, skills, values that lead to self-learning and social learning.

5.3.4 Nurturing and Developing Talents

It can be concluded that the conceptualization of gifts and talents is not standardized. This could lead to disharmony in nurturing and developing what has not been clearly and collectively defined. The current curriculum does not have a framework for identifying and nurturing talent. Consequently, need arises for the curriculum to consider best ways of inclusion of this in order to respond to the uniqueness of each learner in the school community. Moreover, the perception of talents is limited and does not broadly encompass innovation. This component encourages learners to get to the point where they can be entrepreneurial enough to generate income from what they have made or what they can do.

5.3.5 Learning Resources

The current scenario paints a picture of scarcity of resources. The over-stretched infra-structure, inadequate supply of instructional materials and teaching staff in most learning institutions have immensely contributed to poor delivery of curriculum and access to quality education. In Kenya, the system of resource allocation, based on enrolment figures disadvantages 12 counties in the arid and semi-arid areas that are home to 46% of the out of school population. Moreover, the rigid framework for investment in education with conditions and inputs to support the teaching and learning process limits the optimum functioning of the curriculum.

5.3.6 Pedagogy

Based on the findings of this study , it is the traditional teacher- centred methodologies that pervade most classrooms .Interactive pedagogical approaches that focus on the learner’s active involvement are however preferred for developing globally competitive learners. Though quality teacher education and sufficient resources are necessary for suitable pedagogical approaches, teachers are not well grounded in learning approaches that encourage participation of learners as they acquire desired competencies.

5.3.7 Assessment

From the findings in the survey, it is concluded that assessment does not reflect a comprehensive and long term attainment of the learners. Teaching environments and teachers do not offer opportunities for a wide array of assessment that foster cognitive and non –cognitive competencies. The consideration of learners’ performance based on summative assessment alone, while excluding their individual and their’ diverse needs jeopardizes objective judgment of performance.

5.3.8 Emerging and cross-cutting Issues.

There are continuous occurrences of pertinent and emerging social issues that have a considerable influence on the well being of the society. The complexity of these emerging issues and magnitude of their impact cannot be handled without organized learning experiences in both formal and non-formal settings. The challenge is worsened by lack of initiatives that employ hands- on teaching and learning approaches while linking the curriculum to practical actions.

5.4 Recommendations

5.4.1 General Societal Needs

In pointing out the gaps highlighted in the curriculum, the findings and conclusions indicate that what is learnt is not emphasized as a practical reality that learners should experience. Improvements need to be made in terms of a curriculum that contextualizes the realities of challenges in society so that the learners can relate what they are taught to their own experiences.

More experiential situations in and out of school should be applied to bridge the gap between what exists in society and what the country aspires to be across all the dimensions.

5.4.2 Competencies

The conceptualization of the competency based curriculum and its implementation should create the situations that enable graduates to exit and fit into real life or work. The learning environment should be well equipped and activity oriented to create supportive situations for development of competencies for real-life or work related situations.

For learners to develop actual competencies, real transformation of pedagogical and didactic actions of teachers must be implemented.

Decisions also have to be reached on the level of fusion of the content areas or disciplines and the non-domain specific competencies like critical thinking and problem solving, creativity and learning to learn.

Competency based learning cannot be effectively be measured with multiple choice or paper-and-pencil tests that are common practice in Kenyan primary schools. It is recommended that alternative summative and formative assessment is used to support the new way of learning.

Teachers in Kenyan schools need to be re-oriented to understand the theory and practice of a competence based curriculum. Futuristic curriculum programmes and instruction need to be created and continuously validated by creating linkages with real life contexts.

5.4.3 Learning Areas

Choices for learning areas should make provisions that are authentic for the individual learners in their society, without necessarily marginalizing the nation from its development priorities and the pre-dominant global trends that are shaping education.

To factor relevance to the needs of learners and the society, the competency based curriculum should provide for variety with regard to learning areas. Reference should also be made to the Basic Education Curriculum Framework for decisions about learning areas to be taught at a particular level.

The competency based curriculum needs to prioritize vocational and practical subjects, foreign languages, Agriculture, Home Science and Music. Such a curriculum must first be clearly envisioned, then developed and implemented.

Technical and vocational training needs to be re-branded to attract learners and enable them make decisions early about the paths they will choose.

Concerted efforts should be made to incorporate and emphasize the humanistic and social dimensions of education to ensure a renewed purpose for education.

5.4.4 Talents

The curriculum should be reformed and fashioned around the needs, talents and abilities of learners. Additionally, the reform should seek to create a pathway to domicile talents. Given the key roles that both teachers and parents play, they should be equipped to enable them utilize appropriate strategies and infrastructure for identifying and nurturing talents.

Moreover, the understanding of talents should encompass the component of innovation to encourage learners to be entrepreneurial enough to generate income from what they have made or what they can do. This is likely to improve livelihoods of the youth since they will take the talent forward to the level of benefiting from the talent.

The Government of Kenya should initiate linkages with industries targeted at absorbing innovations emanating from the talents.

Education should create space for personalized learning in and through the curriculum. Personalized learning respects, understands and builds upon the uniqueness of each person within collaborative environments viewed as learning communities where all are needed and all support each other. This should be done within the context of supportive resources, both human and material, to enrich the experience

In terms of the depth and engagement with their particular area of interest, interaction with specialist expertise through modeling and relevant facilities is recommended to spur the gifts and talents to greater heights. The curriculum development process is therefore required to keep pace and sometimes get ahead of the learner's needs. This means that the educational programs may

be required to cooperate with communities outside the school to reinforce what the school can afford in relation to facilities and expertise.

5.4.5 Learning Resources

To improve equity in resource allocation, an alternative to the present distribution of the capitation grant according to the number of children enrolled should be reviewed. This will allow for additional support in the form of higher spending per pupil, especially where standards of education are low.

A more integral view of education that seeks synergies between input, processes and outcomes is espoused for the provision of a variety of teaching and learning resources in different formats including use of modern technology that are compatible with 21st Century skills.

In order to address the high teacher pupil ratio, it is important for the government to train adequate teachers, since they are necessary in curriculum delivery.

5.4.6 Pedagogy

Inadequate grounding in learning approaches that encourage participation of learners calls for a teacher assessment programme that compares the teacher levels against their classroom needs. This will ensure that they have the theoretical and practical application of different pedagogical techniques to support learners as they acquire desired competencies.

For the 21st century skills to be developed there is need for effective learning management to support both learning outcomes and skills.

Appropriate pedagogical approaches should be encouraged through progressive government policies to help learners to discover, develop talents and consolidate their real life attributes such as exploration, self-assessment and problem solving.

Teacher training does not prepare trainees to ensure that learners participate actively to understand the lesson. This calls for re-orientation and re-training of teachers to alleviate the pedagogical problems linked to quality and variety of teaching methods. The approach for

teacher support in preparation for implementation should target practicing teachers, those who are in colleges as well as those entering the service, after graduation. Steps should also be made towards preparing supportive teachers in the implementation of new learning areas.

5.4.7 Assessment

More targeted and relevant modes of assessment that provide a balanced and holistic understanding of learners' progress in various abilities need to be developed.

Alternative assessment is needed for both summative and formative assessment to support the new way of learning, since competencies cannot be effectively measured with multiple choice or paper-and-pencil tests

There should be a deliberate effort to develop diverse set of assessment modes to enable learners to perceive learning as a way of demonstrating their talents. Measures could also be put in place to incorporate talents into final marks awarded. Assessment can be tailored to level and needs of an individual pupils.

5.4.8 Emerging Issues

There is need to strengthen partnership with community, private and business sectors to ensure learners achieve the desired values. This will help to minimize the gap between education and societal challenges.

Models for teaching pertinent and emerging issues in schools should embrace whole school approaches that use practical demonstration of pertinent and emerging issues to reinforce learning.

APPENDICES

Appendix1

Knowledge, skills, work habits and character traits commonly associated with 21st century skills:

The following list provides a brief illustrative overview of the knowledge, skills, work habits, and character traits commonly associated with 21st century skills:

- Critical thinking, problem solving, reasoning, analysis, interpretation, synthesizing information
- Research skills and practices, interrogative questioning
- Creativity, artistry, curiosity, imagination, innovation, personal expression
- Perseverance, self-direction, planning, self-discipline, adaptability, initiative
- Oral and written communication, public speaking and presenting, listening
- Leadership, teamwork, collaboration, cooperation, facility in using virtual workspaces.
- Information and communication technology (ITC) literacy, media and internet literacy, data interpretation and analysis, computer programming
- Civic, ethical, and social-justice literacy
- Economic and financial literacy, entrepreneurialism
- Global awareness, multicultural literacy, humanitarianism
- Scientific literacy and reasoning, the scientific method
- Environmental and conservation literacy, ecosystems understanding
- Health and wellness literacy, including nutrition, diet, exercise, and public health and safety

Appendix 2- Codes for Qualitative Data

CEO-RIV-UG- Interview, Chief Executive Officer, Industry, Uasin Gishu County

CS-FGD-NTC–NAR-College students’ Focus group discussion Narok Teacher Training College, Narok County

INF-SEC-NAI –Interview Informal Sector, Nairobi

KI- ROU-HOB-Key Informant Interview, Rongo University, Homa Bay

KI-CDE-GAR- Key Informant Interview, Garissa

P –FGD-BJP –MUR-Pupils’ Focus group discussion Bishop John Mahiani Junior School, Murang’a,County

P-FGD-BUP-LAK- Pupils’ Focus group discussion Bungoma Primary school, Laikipia, County

P-FGD-HPP-KIL -Pupils’ Focus group discussion High Vision Academy, Kilifi, County

P-FGD-KEBP-NYM-Pupils’ Focus group discussion Keboba Primary School, Nyamira County

P-FGD-NAP-LAK-Pupils’ Focus group discussion Nanyuki Primary School County

P-FGD-MAP-NAR Pupils’ Focus group discussion Masantare Day and Boarding Primary school, Narok, County.

P-FGD-MIP-MAK-Pupils’ Focus group discussion Miseke Primary School, Makueni, County

P-FGD-SJP-BUN- Pupils’ Focus group discussion ,St.Joseph’s Primary School Webuye, Bungoma, County,

P-FGD-TRP-NYE.- Pupils’ Focus group discussion, Temple Road Primary School, Nyeri County

PA-FGD-BOKPP-KAK - Parents' Focus group discussion Booker Academy (Private Primary), Kakamega, County.

PA-FGD-DPP-NBI- Parents' Focus group discussion Drumvale Primary School (Private), Nairobi, County

PA-FGD-KAP-MAK- Parents' Focus group discussion Kathonzweni Primary School, Makueni, County

PA- FGD-KAP –MAN- Parents' Focus group discussion Kamor Public Primary school Mandera, County.

PA-FGD-KIP–MUR- Parents' Focus group discussion Kiarithaini Primary school, Murang'a County

PA-FGD- MAP –KWA- Parents' Focus group discussion Makwenyenye Primary school, Kwale, County

PA- FGD-MBP-HOB- Parents' Focus group discussion Mirogi Boys Primary school, Homa Bay, County

PA-FGD-MGP-LAM- Parents' Focus group discussion Mahmoud Bin Fadhil Girls' Primary School, Lamu, County

PA-FGD- MVP -KAK- Parents' Focus group discussion Malava Primary School, Kakamega, County

PA-FGD- NYP –NYM- Parents' Focus group discussion Nyagachi Primary school, Nyamira, County

PA-FGD-RKP-HOB- Parents' Focus group discussion Ruby Krap Public Primary school, Homa-Bay, County.

PA-FGD-SEP-NYM- Parents' Focus group discussion Sengera Public Primary school, Nyamira, County.

PA-FGD- UNP –MAK- Parents' Focus group discussion Unoa Primary School, Makueni, County

PA- FGD-WAP –KWA- Parents' Focus group discussion Waa Primary school, Kwale, County

PL-FGD-AFP-GAR Pupil Leader's Interview, Alfaruq Primary School, Garissa.

PL-FGD- JPP-LAK- Pupil Leader's Interview, St. John Paul Primary School, Laikipia County

PL-KAR-PMU Pupil Leader's Interview school, County

PL- -BUS .- Pupil Leader's Interview St Paul's Amerikwae Primary Shool, Busia, County.

PL- OPP-USG.- Pupil Leader's Interview school, Outspan Primary School, Uasin Gishu, County

PL-SOP-USG - Pupil Leader's Interview school, Sosiani Primary Schools, Uasin Gishu County

MAN-IND-KAK- Interview, Manager of Industry, Kakamega County

MAN-IND-MAK-Interview, Manager of Industry, Makueni County

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