

FROM PHYSICAL EDUCATION TO SPORTS SCIENCE AS A CAREER PATHWAY: ASSESSING OUR READINESS

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ABSTRACT

Since education is a vehicle for economic and social change, it is imperative that a country's education curriculum is constantly reviewed to keep it abreast with the globalization of labour market and demand for acquisition of the twenty first century skills. Many countries globally, have shifted from content based curricula to competency based teaching learning approaches. The implementation of competency based teaching-learning approaches can be traced to teacher education in the United States of America in the 1970s. Since then, competency based learning approaches have been developed and implemented in a range of professional areas and learning institutions in various countries. UNESCO (2015) views Competence Based Curriculum (CBC) as a vehicle through which a country can empower its citizens with skills, knowledge and values that will help them fit in the global village which is characterized by advancing technology. Further, IBE-UNESCO (2017) highlighted that CBC enables learners to perform practically and measurably, using the skills acquired through learner centered pedagogy. Curriculum is the means through which a nation endows its people with essential skills, knowledge, values and attitudes that enable them to be fortified for individual and national progression. Curriculum, thus, must fulfill the desires of the intended citizens and the country as envisaged. The Kenya Institute of Curriculum Development (KICD) embraced a Competency Based Curriculum (CBC) in the quest for reforms informed by the findings of needs assessment report sanctioned in the year 2016. The three decades' implementation of the 8-4-4 education structure has faced many challenges leading to failure to realize its noble philosophy of "education for self-reliance". As the third major reform in Kenya's education, the implementation of the CBC in Kenya, is an effort to adopt an international fit reform and is a viable decision to ensure its citizens' move to the attainment of global competence. Unlike the 8-4-4 system that was touted as theoretical and exam oriented, the CBC is concerned more with competencies and learners skills. In fact it identifies and sets out Arts and Sports Science as one of the three career pathways at the Senior Secondary School level. The school is positioned to identify and nurture talents as the first academy of the stars, since it can discover the talents of the athletes at an early age. Through the healthy and sound school atmosphere, every young person can practice his/her physical hobbies. Therefore, The sports activities at school can then become a fundamental component in the formation of an integrated personality of the individual. In addition, they can modify the faulty behaviors of the students to reach the highest levels, as it is the basic structure for the sports movement. However, judging from how Physical Education has been taught and implemented under the 8-4-4 curriculum where it is compulsory albeit non-examinable, critics are skeptical about the success of the Sports Science as a career pathway at Senior Secondary School Level. As a complex system of education, the CBC has flourished in the vocational and training levels as opposed to basic education. However, it is believed that it can also flourish and the basic education level and serve the needs of the learners as well as the needs of the country to become a middle level economy by 2030.

Key word: Physical Education, Curriculum, Colonization , African, Activities

1. INTRODUCTION

The 21st century ushered in a new dawn and a new era in doing things. The proliferation and growth of ICT, the development of efficient transport systems as well as the growth in social media for both work and leisure activities has seen an unprecedented percentage of the population develop obesity and other related health complications. This has largely been attributed to so much of passive activity or the lack of any physical activity at all. As the society advances towards a very complex and technology driven system with varied challenges to be solved, the review of the education curriculum in a country becomes an imperative. This ensures that a country's citizens are able to access and attain a standard and quality education to meet the country's aspirations.

Kenya inherited a racially segregated colonial system of education at independence. This was a bottle neck to the nation's desired development trajectory. In 1985 following the presidential declaration, the country overhauled its education curriculum where it adopted the 8-4-4 system of education. The 8.4.4 curriculum has been implemented for three decades. The graduates at every level were envisaged to attain skills that would enhance self-reliance. However, its' philosophy of "education for self-reliance" has not really been accomplished. The practical subjects which were the essence of the reform were made optional. This gave loophole to teachers not to teach the subjects. The curriculum ended up being too academic and exam oriented.

The 8-4-4 curriculum ended up experiencing challenges ranging from insufficient infrastructure and resources, inadequately trained teachers, a large number of learners in the classrooms, unskilled graduates, and increased dropouts. The noble intent faced challenges that prompted reform changes in 1992, 1995, and 2002. Issues on overloads within and across the subjects, unnecessary overlaps within topics and subjects, and emerging issues were changed. Nevertheless, fundamental issues on the curriculum were not resolved. Consequently, the government conducted a national education needs assessment in 2009. The National Educational Needs Assessment report in 2009 proposed the adoption of a Competency Based Curriculum (CBC). This was in order to align the education sector with the Kenya Constitution 2010, East Africa Community harmonization treaty agreement, and Vision 2030 goals.

The Competency Based Curriculum (CBC) was implemented in 2017 in a phased manner in both lower and upper primary grades. The pioneer CBC class will be undergoing their final primary school assessment in December 2022. Under the Competency Based Curriculum (CBC), it was envisaged that learners would develop competencies and skills as well as nurture talents that would allow them to pursue different career pathways at Senior Secondary School level. The career pathways would include Arts and Sports, Social Sciences and STEM. This would be a departure from the 8-4-4 system where learners could only choose their career paths after completion of Secondary School.

Competency Based Curriculum (CBC) has been implemented in developed countries with commendable successes especially at the vocational education and training level. However, the implementation in African countries is struggling to make it a reality. The World Bank (2011) observed that CBC emphasizes on competence development among learners rather than the acquisition of content knowledge. The curriculum entails a change in paradigm from content-based approaches to learner-based approaches. Further, the KICD (2017) states that CBC involves the use of learner-centered teaching methods like role plays, discussion, problem-solving, projects, case study and study visits. In the use of such methods, the teachers' role change to a facilitator, coach and mentor who guides the learning process. The learners engage

and interact with the learning content taking responsibility for their own learning through direct exploration of knowledge which results in desired experiences. According to KICD (2017), this approach enhances the preparation of students for their future careers. In addition, Waweru (2017) posits that CBC incorporates core competencies as unique elements in the curriculum. CBC learners are allowed to learn at their own pace and move to more advanced content demonstrating mastery of desired competences.

Sports have been redefined in the Competency Based Curriculum (CBC) in Kenya by placing it on an equal rating as other disciplines that are both academic and career pathways that learners pursue. The non-examinable Physical Education in the curriculum has been upgraded into an academic and career pathway. There is therefore need to examine the implications of this shift so as to ensure effective implementation of the reform. This paper reviews the history and current status of Physical Education, examines the new curriculum reform that redefines sports as an independent academic and career pathway, discusses the significance of sports as a career pathway and finally underscore the implications of this reform in terms of the requisite paradigm shift, preparedness and partnerships. The paper holds that through the theory and practice of sports within the concept of basic education, learners will be able to gain competencies that can thrust them beyond sporting talent into successful sporting careers. This would also offer an easier transition from basic education into sports academies for nurturing of young sport talent, as established under the Sports Act of 2013 (Republic of Kenya, 2013).

2. HISTORY AND CURRENT STATUS OF PHYSICAL EDUCATION AND SPORTS IN KENYAN SCHOOLS

The history of sports in Kenya has been traced by Njororai (2013) in his study, to the precolonial period. He argues that prior to the coming of the Europeans, informal education was practiced to impart cultural knowledge and customs to all and sundry. Mwisukha et al. (2003) contend that this indigenous education had a component of sports, but only to a less extent as sports were generally regarded as a pastime activity. However, Sifuna (1990) asserts that sports and play were not a pastime activity, but the actual conduit through which the young were taught to emulate the actions of elders, as well as received training that informed their character and identity.

During the pre-colonial period, sports and play were basically interwoven into the very fabric of African culture to help children and youths in acquiring cognitive, social and physical skills critical in adulthood. In the various indigenous communities, people actively participated in traditional sports such as dancing, hunting, wrestling matches, shooting with bows and arrows among others. Rintaugu et al. (2011) explain that the activities that people engaged in for basic survival were related to these early forms of sports and games. For instance, Hunting and the need for defense was related to spear throwing; to meet the need for food through hunting was helped by running; fishing and communication across large rivers and lakes used swimming; To defend their communities during attacks by enemies, wrestling was as away of identifying gallant fighters who would be relied upon.

During the colonial period (1895- 1963), the Europeans introduced most of the modern sports such as tennis, cricket, rugby, football and basketball in Kenya. The traditional sports were set aside and were viewed as crude, primitive, barbaric and obsolete. The modern sporting activities got infused into the educational activities bit by bit. However, Mahlmann (1992) argues that sport was introduced and used as a weapon of colonialism, and that some of the sports were played along racial lines. For example, rugby and tennis were strictly for whites, and hockey was played by Kenyans and Indians. He further opines that the main aim of the sporting culture was

to dominate the social conversation of the community by making Africans feel inferior in all aspects of life, having been defeated in sports competition. This made Africans have a negative attitude towards sports and especially European sports right from the onset. According to Mwisukha, *et al.* (2003), the colonialists laid emphasis on the inclusion of Physical Education and sports in the School Curriculum as an extra-curricular activity. In the Phelps-Stokes Commission Report of 1924, it was observed that there was need for official inclusion of recreation in school curriculum, with the main focus on Physical Training (PT). Rintaugu, Mwisukha & Munayi, (2011) have observed that the commission's concern was followed by the development of a PT curriculum for schools whose key focus was on the teaching of the modern sports as well as introduction of competitive sports in schools, communities and international levels.

Upon gaining independence in 1963, the government put in place several educational commissions with a mandate to restructure the system of education with a view to make it relevant to the needs and interests of her indigenous people. The Kenya Education Commission (also known as the Ominde Commission) of 1964 made several recommendations. Among the recommendations was emphasis on the inclusion of Physical Education as a co-curricular activity in the school curriculum (Ominde, 1964). As a co-curricular activity, Physical Education was to complement the regular curriculum. In 1967, the first Physical Education syllabus for primary schools was drafted, and in 1979, the first expert was appointed as a teacher of the subject. The development of Physical Education syllabus for secondary schools then followed in 1980 and was published in 1985 (Mwisukha, Rintaugu, Kamenju, & Mwangi, 2012). In 1980, following a Presidential decree, Physical Education became a compulsory subject in basic education (Gitonga, Andanje, Wanderi & Bailasha, 2012). However, it was to be non-examinable. Consequently, little effort was made to contribute to Physical Education as a subject despite it being compulsory.

3. COMPETENCY BASED CURRICULUM: STRUCTURE AND CAREER PATHWAYS

According to Esau & Mpofu (2017), a national curriculum that is consistent with the evolving needs of a nation and its citizens is one of the key drivers of socio-economic development. Therefore, the curriculum must be reviewed from time to time in order to meet the dynamic needs of learners and society. In Kenya, the need to re-align the Education Sector to Vision 2030 and the Constitution of Kenya 2010 led to the setting up of Prof. Douglas Odhiambo Taskforce in 2011. Vision 2030 singled out Education and Training as the vehicle that would drive Kenya into becoming a middle-income economy. Otieno, (2016) observes that in addition, free and compulsory Basic Education as a human right to every Kenyan child is provided for in the Constitution of Kenya 2010. This implies that education in Kenya has been considered as a key factor that would expedite socio-economic growth, provide skilled manpower, stem population explosion, lower crime rates and improve life expectancy.

The impetus for curriculum reform in Kenya, was that, the 8-4-4 system was too rigid and had limited opportunities to align basic education with children's career interests, aptitudes, and abilities (Warrio, 2019). Kabita and Ji (2017) assert that the 8-4-4 system ignored many children whose aptitude, interests, and abilities lay in vocational education, arts, and sports while favoring the few who scored high grades at the traditional subjects at the end of secondary education, before proceeding for higher education and taking up white-collar jobs. The introduction of CBC was meant to close this identified gap. Its implementation in Kenya was hinged on the report of the "The Task Force on the re-alignment of the education sector to the Constitution of Kenya

2010” released in 2012 (Republic of Kenya, 2012). The Task Force recommended a 2-6-3-3-3 education structure which stood for, 2 years of Pre-primary, 6 years of Primary (3 years lower and 3 years upper), 6 years Secondary (3 years junior and 3 years senior), and 3 years minimum University education (2-6-3-3-3).

The rationale for the revised structure was to ensure learners acquire competences and skills that would enable them to meet the human resource aspirations of Vision 2030, ensure the attainment of 100% transition rate from primary to secondary, thereby reducing wastage by introducing automatic progression to the junior secondary phase based on the acquisition of core skills and competences (literacy, numeracy and communication skills) and focus on early identification and nurturing of talent in individual learners. This was also meant to align the Kenyan structure with international best practices and provide a system that is not examinations oriented.

According KICD (2017) Competency Based Curriculum (CBC) is a systems of instructions, assessment, grading, and academic reporting that are based on students demonstrating acquisition of competence. The focus is on the set of specific competence (knowledge, skills, values, attitudes) associated with successful academic performance. It is a knowledge application-oriented type of education that requires competent teachers. The competencies to be achieved by learners include communication and collaboration, critical thinking and problem solving, imagination and creativity, citizenship, learning to learn, self-efficacy, and digital literacy. These are transferred to learners through learning areas (subjects). In addition, Gruber (2018) posits that Competency Based Curriculum (CBC) is based on learners demonstrating the ability to apply the knowledge, skills, attitudes and values they acquire as they progress through their education. Competency Based Curriculum (CBC) is an approach in which students work at their own pace to demonstrate mastery in the competencies necessary for their chosen field of study. Further, Jallow (2011) states that when students demonstrate a competency, they are demonstrating their ability to do something. One of the strongest outcomes of CBC is increased students’ engagement which results from students’ ownership of the learning process. CBC also promotes individualized learning and accommodates a variety of learning styles, making it a truly personalized experience.

Competency Based Curriculum (CBC) has tentatively dominated the developed countries' education system since the early 1950s. The first adoption of Competency based training education (CBTE) was in 1970 in Vocational teacher training college in the USA. The trainee teacher students were expected to demonstrate mastery of behavioral objectives to indicate their progress. The knowledge, skills, and techniques were the major emphasis. The CBTE has over the years been adopted in many countries like UK, Australia, and Asian Nations and gradually in Africa. In Africa, the Competency-Based Curriculum was pioneered by South Africa in 1998 as a result of an acute shortage of professionals such as engineers, technicians and artisans. The adoption of CBC was meant to change the attitudes of all South Africans and equip them with employable skills to cope with challenging issues in the 21st century (Mulenga and Kabombwe, 2019).

In Rwanda, the competency-based curriculum (CBC) was launched in April 2015. The new curriculum has been lauded for being less academic and more practical oriented, more skills-based and tailored to a working environment and daily life (REB, 2015). In schools where teachers used CBC techniques, learners enjoyed learning; attendance improved and pass rates increased. In 2013, the Zambian education system revised its curriculum from a knowledge-based one to a skills based one in a bid to prepare learners for future challenges in the rapidly

changing world (MoGE, 2013). According to Zulu (2015), the aim was to produce self-motivated, life-long learners, confident and productive individuals, holistic, independent learners with the values, skills and knowledge to enable them to succeed in school and in life.

3.1. The Kenyan Competency based Curriculum

As from 2019, Kenya took a substantive shift from the system of eight years in primary; four years in secondary; and four years in university (8-4-4) to two years in preprimary; three years in lower primary; three years in upper primary; three years in junior secondary and three years senior secondary. The duration for university and tertiary training institutions will be contingent upon each course offered, for instance, certificate courses will take a shorter period as compared to diploma or degree courses. Furthermore, university degree courses will not take the same time to complete; however there will be a minimum for all courses (UNESCO, 2018).

3.1.1 Pre-Primary & Primary Level

At the Pre-Primary level learners will cover seven basic learning areas which include: Language Activities, Mathematical Activities, Environmental Activities, Psychomotor and Creative Activities, Religious Education Activities and Pre-Braille Activities. On the other hand learners in lower primary level will cover nine learning areas. These include: Literacy Activities/Braille Literacy Activities, Kiswahili Language Activities/Kenya Sign Language for learners who are deaf, English Language Activities, Mathematical Activities, Environmental Activities, Hygiene and Nutrition Activities, Religious Education Activities, Movement and Creative Activities (KICD, 2017).

In Upper Primary, learners will continue with the Lower Primary learning areas with addition of a few others. The Upper Primary learning areas as outlined by KICD (2017), will include: English, Kiswahili or Kenya Sign Language, Home Science, Agriculture, Science and Technology, Mathematics, Religious Education, Creative Arts, Physical and Health Education and Social Studies. Arabic, French, German, Mandarin will be offered as optional foreign languages and the learners can also learn indigenous languages, Kenyan Sign Language and Braille literacy.

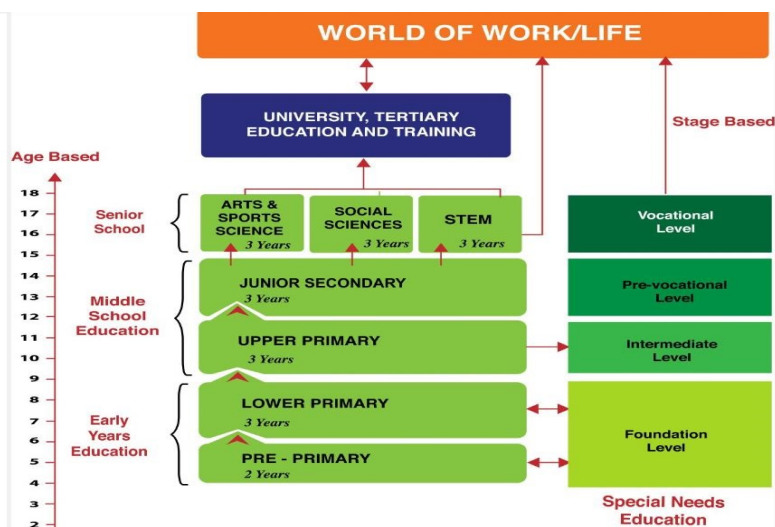


Figure 1: Structure of Organization of Basic Education of Kenya’s New Curriculum (Source: Republic of Kenya, 2017)

3.1.2 Junior Secondary School

This level will give learners a chance to achieve their potential, as in aptitudes, interests and abilities whereas gaining from comprehensive curriculum. This is purposed to prepare the learners to choose a suitable pathway and track at Senior Secondary School level that is associated with their career of concern. In the Junior Secondary School, the Learners will be required to take the 12 core subjects provided. These will include: English, Kiswahili or Kenyan Sign Language, Mathematics, Integrated Science, Health Education, Pre-Technical and Pre-Career Education, Social Studies, Religious Education, Business Studies, Agriculture, Life Skills, Sports and Physical Education (KICD, 2017).

3.3.3 Senior Secondary School

The Senior Secondary School marks the end of Basic Education as defined in the Education Act, 2013. It lays the foundation for further education and training at the tertiary level and the world of work. This level of education comprises of three years of education and the targeted learners are the 15 to 17 age bracket. Learners exiting this level of education are expected to be “empowered, engaged and ethical citizens” ready to participate in the socio-economic development of the nation (Republic of Kenya, 2017).

The learner entering this level are expected to have had opportunities at lower secondary and to have explored their own potential, interests and personality. They are therefore expected to be ready to begin specialization in a career path of choice. The specialization entails choosing to pursue studies in one of the three pathways available in Senior Secondary School. There will be three career pathways to choose from at the Senior Secondary School Level under the Competency Based Curriculum. These will include: Arts and Sports Science, Social Sciences and Science Technical Engineering and Mathematics (STEM). Each of the pathways will have various individual subjects attached to it. Under the Arts and Sports Science Pathway we will have Sports Science, Performing Arts, and Visual Arts. Under the Social Sciences Pathway, learners will have to choose between Languages and Literature and Humanities and Business Studies. Under STEM, learners will choose from among Pure Sciences, Applied Sciences, Technical and Engineering and Careers and Technology Studies (KICD, 2017).

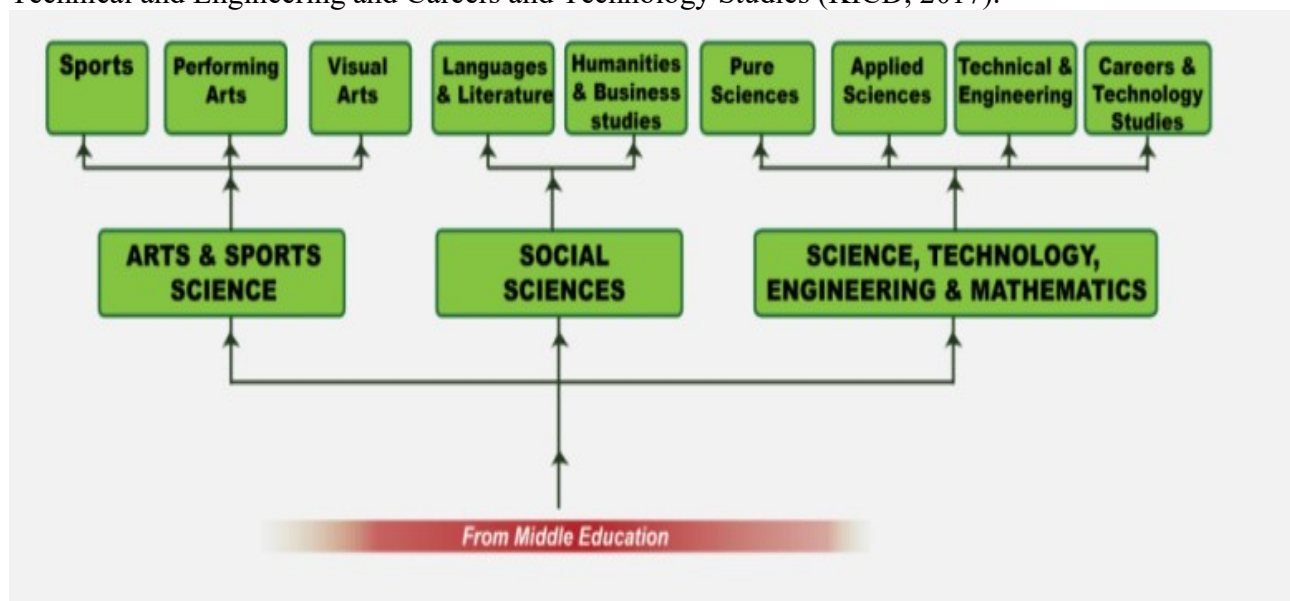


Figure 2: Career Pathways in Senior Secondary School in Kenya’s New Curriculum (Source: Republic of Kenya, 2017)

A learner progressing from Lower Secondary to Senior Secondary can select and pursue any pathway depending on their personality, ability, interest and career choice. Each Senior Secondary School is expected to make informed decisions with regards to the pathway of choice based on availability of the requisite infrastructure that would ensure development of the competencies identified in that pathway. Schools can also decide to offer one or more pathways depending on the ability to acquire the infrastructure necessary for acquisition of the identified competencies (Republic of Kenya, 2017). The Senior Secondary Schools will be specialized institutions that will provide opportunities for learners to focus on a field of their choice as well as form a foundation for further education and training and gain employable skills. Senior Secondary Schools will be required to organize open days to enable learners and parents to glean the information necessary for effective decision-making. Additionally, a robust parental empowerment and engagement programme will be necessary to strengthen the involvement of parents in this process.

In every track, learners have to select learning segments on the basis of their abilities, aptitudes, and career concerns. Community Service Learning and Physical Education are compulsory for all students. Emphasis in each track and pathway is not only on the learning field, but similarly on entrepreneurship opportunities after senior school and careers. Further, there is stress on mentorship from efficacious personalities in the relevant tracks and pathways. Community Service Learning is obligatory as it assimilates classroom learning and community service which empowers students to connect and apply their classroom experiences to the community service, while on the same breath augmenting their citizenship through service delivery (Republic of Kenya, 2017).

4 ARTS AND SPORTS SCIENCE AS A CAREER PATHWAY

According to Republic of Kenya (2017), learners pursuing sports science are expected to learn particular core subjects as well as some elective subjects. Sports Science core subjects are Human Physiology, Anatomy and Nutrition, and Sports Ethics. In addition, the learner shall choose a minimum of one and a maximum of two of the following optional subjects: Ball Games, Athletics, Indoor Games, Gymnastics, Water Sports, Boxing, Martial Arts, Outdoor pursuits and Advanced Physical Education. This is to be guided by the learner's personality, interests, ability and career choice. Students graduating from this pathway may join middle level colleges or universities to pursue careers in the sports industry depending on their interests, abilities and personality. They shall also be able to join the world of work.

The African Union (2008) defines sport as a “physical activity that is governed by a set of rules or customs involving specific administration, governing body, organization and an historical background and often engaged in competitively”. This includes all forms of physical activity that contribute to physical fitness, mental well-being and social interaction, such as play, recreation, organized or competitive sport and indigenous sports and games. Thus a sport can be seen as “a game, competition, or activity needing physical effort and skill that is played or done according to rules, for enjoyment and / or as a job.” On the other hand Physical Education can be seen as an “instruction in physical exercise and in the care and hygiene of the human body”. In relation to the school set-up, physical education can be seen as “a statutory area of the school curriculum, concerned with developing pupils’ physical competence and confidence, and their ability to use these to perform in a range of activities” (Bailey, 2005). Such development of physical competency and skill majorly involves sports and games. Consequently, as observed by Holt, Streat and García (2002), sporting activities form a major part of most Physical Education programs. In an evaluation of the relationship between Physical Education and sport, Bailey

(2005) explains that Physical Education focuses on learning the skills and understanding that are requisite for participation in physical activities such as sports. Unfortunately, Physical Education lessons are rarely taught in most public schools in Kenya (Kariuki, 2017). According to Quay (2014), in cases where teachers make an effort to engage students during the Physical Education lesson, they instead teach other subjects that they consider to be “academic”, as Physical Education and sports are considered co-curricular activities which students can engage in after classes. Going by this finding, it is imperative to question whether the country is ready for sports science as a full scale career pathway.

Over the years, countries that have excelled in international sports and sporting competitions have used university education to nurture and develop students’ talents in elite sports. For instance, top American and European sport performing nations and their universities have collaborated to nurture talents in elite sports through university education. Capranica & Guidotti (2016) argue that these countries employ prudent management strategies and structures to integrate both academics and elite sports for the talented students’ career pathways. However, universities in Kenya have not integrated academics with students’ talent development in elite sports. Aquilina and Henry (2010) have advised that, in order to integrate academics in university education and students’ talent in elite sports, talented students must be nurtured in a developmental process and supporting environment. They recommend that, to accommodate special delivery processes in education for the talented students, universities should operate a flexible academic schedule to facilitate examinations, sports training and competitions.

5. IMPORTANCE OF SPORTS AND SPORTS SCIENCE AS A CAREER PATHWAY

The importance and benefits of sports as an academic and career pathway for individuals cannot be underestimated. Learners pursuing sports as a career pathway will be equipped in theory and practice for career openings such as self-employment, or employment opportunities connected to sports (Cola, 2006). These include becoming instructors, physiotherapists, sports coaches, sports nutritionists, sports massage therapists, personal trainers, gym attendants, fitness program coordinators, swimming pool attendants, sports researchers, public relations officers. Others career opportunities are refereeing, coaching, lifesaving, teaching, athletics trainers, stadia management specialists, sports masseurs, aerobics and anaerobic trainers, sports journalism, and many more. These are careers that not only benefit the individual, but also contribute to the country’s socioeconomic development.

As a major enhancer of economic and social development of individuals and nations, sport has enabled many youth to rise to stardom, affluence and influence as well as contributing to development of their nations through pursuit of the sporting careers. Despite this major contribution, the scope of this achievement in sports as a career pathway in most African countries, still remains curtailed by the perception of sports as a co-curricular activity that only complements the regular school curriculum.¹The general attitude of indifference towards sports and Physical Education in schools does not make the situation any better. Physical Education and sports in the school is given less priority and has inadequate funding and inadequate essential resources. For an effectively launched trajectory of sports as a career pathway in the new curriculum, there is a great need for a societal paradigm shift, government’s preparedness and

¹ Hoogkamer, W., Snyder, K. L., & Arellano, C. J. (2019). Reflecting on Eliud Kipchoge’s marathon world record: an update to our model of cooperative drafting and its potential for a sub-2-hour performance. *Sports Medicine*, 49, 167-170.

multi-sectoral partnerships that can create synergies among the relevant stakeholders in Education and Sports. The government has to strategically professionalize sport talent development towards realization of the Sports Pathway.

In addition to employment opportunities, sport provides opportunities for self-realization and expression as well as individual development and fulfilment (Meyer & Roche, 2017). The learning environment for sports is experiential and participatory giving learners the opportunity to think critically and articulate their thoughts through creativity and collaboration. Participation in sports encourages the learners to relate positively to others and engage in movement experiences that promote and support the development of social skills. Sport fosters critical thinking, decision- making and problem solving. The rules and penalties in sport enables the learner to understand the role and the significance that sport plays in promoting a fair and just society. This is strongly supported by the social constructivist theory that highlights the fundamental role of social interaction in learning. Involvement in indoor games will build those social skills in the learner associated with team sports such as reliability, conflict resolution, confidence and positive self-image, and teamwork. Fraile (2017) who investigated the feasibility and possible benefits of indoor games in primary school found that kinesthetic perception, rhythm perception, hard work, dedication to task, self-control, and more skills were developed and strengthened as the learner solved problems, interacted with others and accomplished set goals.

Furthermore, the broader goals and interests of education and socio-economic development of nations are met through sports. Sports has been tailored as one of the main means to achieve Kenya's national goals of education. For example, according to Mwisukha, Njororai and Onywera (2003), there are several aspects by which sports has contributed towards national development in Kenya. These include: provision of opportunities for advertising and marketing; production industry for sporting goods such as sportswear and equipment; creation of employment opportunities for the local people and trade between Kenya and other countries; income to the government through taxes levied; enabling people to engage in recreational activities after routine work; promotion of the tourist industry especially when hosting major international sport events, which also stimulates the local economy particularly for hotels, bars and restaurants, taxis and other retail businesses.

Through sports, the goal of promotion of individual development and self fulfilment is achieved by athletes earning a living directly from match allowances and provision of employment opportunities in public and private sectors. Learning about and / or participating in international sport events enhances promotion of international consciousness and fostering positive attitudes towards other nations. Sports can also be used to foster nationalism, patriotism and promote national unity.² Lim (2019) observes that leisure in the form of spectator sports acts as an entry point to, a promoter of, an educator of, a symbol of, an initiator of conversations and dialogs on, and a unifying mechanism for national unity in Malaysia. This is also seen when Kenyan teams compete on the international arena. Kenyans, regardless of ethnicity race or religion come together in solidarity to support their teams, which promotes peace and harmonious existence.

² Currie, J. (2016). Using sporting themes to engage young males in health education lessons. *Education and Health*, 34, 25-30.

6. OPPORTUNITIES AND CHALLENGES IN SPORTS AND SPORTS SCIENCE AS A CAREER PATHWAY

Despite the inclusion of sports and Physical Education as a career pathway in the Competency Based Curriculum (CBC), the implementation is bound to face enormous challenges. This can be inferred from the challenges that the teaching of Physical Education has faced over the years despite it being a compulsory subject albeit non-examinable at the basic level of education. For instance, in a study to examine the implementation of Physical Education curriculum in secondary schools in Kitui County, Muinde (2014) found that: there were inadequate facilities and equipment in schools hindering effective implementation of Physical Education curriculum; there was a shortage of trained Physical Education teachers in schools; funds for running Physical Education programmes were inadequate; Physical Education was not examined by Kenya National Examination Council (KNEC) hence students were not motivated to take it seriously; Physical Education required allocation of more time on the timetable for effective implementation of curriculum. These maybe the same challenges that may plague the implementation of the CBC when it comes to sports and sports science career pathways. There is need for training and regular servicing of Physical Education and sports teachers. Making Physical Education a core and academic subject in schools with learners' competencies evaluated as proposed by Muinde (2014), and as also envisaged in the new curriculum reform may solve this problem. However, turning sports into an academic subject may again introduce another challenge, in view that sports needs to be enjoyed.

Further, Quay (2014) concurs that there has been an inadequacy of trained and qualified Physical Education teachers in most schools. This is because, rarely will a school request for a Physical Education teacher when the examinable subjects are still understaffed. Consequently, the physical component of basic education has remained least developed, and Physical Education persistently treated as a lesser subject than others. Studies have also shown that most sports and Physical Education departments in schools struggle with inadequate funding and chronic lack of basic resources. Professional development of sports and Physical Education teachers has similarly not been prioritized. Furthermore, the experiences of teachers posted from the universities to teach sports and Physical Education as one of the teaching subjects have been devastating. As Wanyama (2011) in Quay (2014) explains from personal experience:

“My teaching subjects were PE and Kiswahili.... Since I was allocated a full teaching load in Kiswahili, a compulsory and examinable subject, it took precedence over PE classes. At my second school the situation was the same: I was Head of Games Department but PE was ignored. In a third school, when the Principal introduced me at the school assembly as the new PE teacher, the students burst out laughing. Sports and PE teachers in Kenya face many challenges in their work, the biggest of which is to convince students and colleagues that sports and PE is an important subject and worthy of support. Often, I would go to take my PE class only to find a colleague using my allocated PE time to keep the class in for more work in an “academic” subject. In such instances I would have no choice but to let the teacher continue because, in Kenya, examinable subjects are given priority. Whenever I complained I would be reminded that there was enough time in the evening for students to “go out and play.” Noteworthy also is that some of my colleagues and some students too, were amused at the thought that one could study PE at university level as I did.”

This clearly shows that sports and Physical Education in Kenya has been widely viewed as not sufficiently academic and not a necessary subject. This attitude has contributed to its

devaluation and lack of status in schools. For sports to take root in the education system under the new curriculum, just as other “academic subjects” like Mathematics or Biology, a radical change in the way of thinking and behaviour of all stakeholders is inevitable. When a paradigm shift occurs, preparedness for change can be easily undertaken.

The Physical Education and sports teachers’ inadequacy problem can be addressed by the government channeling more financial resources toward the training, employment, and remuneration of the teachers so as to drive Physical Education and sports programs in the country. To , Expansion of the teacher training institutions by the government would ensure adequacy of Physical Education and sports teachers in the country. Further, institutions that train Physical Education and sports teachers will need to focus more on Physical Education pedagogy, skill development, and the content related to health. This Physical Education teacher preparation approach will empower potential teachers to assist youth in preventing and managing the emerging problem of obesity and overweight.

In view of the current status of sports and Physical Education in schools, a paradigm shift is necessary for sports pedagogy to be perceived as needful and useful. A paradigm shift is “a time when the usual and accepted way of doing or thinking about something changes completely”. It is basically a fundamental change in approach or underlying assumptions about something; a radical change in the way of thinking and behaviour.³ Research has shown that sports and Physical Education lessons are rarely taught in most public schools. In a study on attitudes and practices of primary school pupils, teachers and head teachers in Physical Education in Kiambu County, Kariuki (2017) found that very few public schools were practically teaching Physical Education. In addition, the attitude of pupils and teachers towards Physical Education were negative. In cases where teachers made an effort to engage students during the Physical Education lesson, they instead taught other subjects that they considered to be “academic”, as Physical Education and sports were considered co-curricular activities which students could engage in after classes.

Curriculum support materials play an important role in the curriculum implementation stage at the classroom level. In Kenya, Physical Education textbooks are published by independent authors and private publishing firms. The Kenya Institute of Curriculum Development is a publisher of the last resort, and as such, it is expected to publish books that all other authors have failed to publish. This, in a way, explains the prevailing limited opportunities that are available for publishing a variety of reference materials that are required for effective learning and teaching of Physical Education. The implementation of any curriculum is highly dependent on the availability of the requisite curriculum materials. For teachers to effectively implement the new curriculum, schools need the relevant teaching / learning materials. These are teaching-learning inputs like: syllabi, textbooks, charts, posters and maps. They by and large constitute the subject matter content that should be taught in schools. The production of the teaching learning materials such as textbooks should be adequate, and distribution should get to the remotest of areas of the country on time. Syomwene (2017) opines that one resistance to educational change is lack of resources and facilities. The need for these materials in schools is higher now than it was ever before, because an overhaul of an entire curriculum makes most of the curriculum materials that were in place obsolete or partially obsolete.

A lot of new programs normally suffer a setback at the point of implementation. The first key variable in successful implementation of a sports curriculum is the human resource and

³ Ornstein, A. C & Hunkins F. P. (2009). *Curriculum Foundations, Principles and Issues*. New York: Pearson Education, Inc.

capacity. In a study to establish the influence of teacher-related factors on the implementation of Physical Education syllabus in public primary schools in Manga sub county, Zipporah, Kadenyi and Maithya (2016) found that majority of the teachers were not adequately prepared for the implementation of Physical Education syllabus. The study recommended that the Ministry of Education needed to put in place mechanisms for teacher training, and enforcing of regular supervision of the implementation of the Physical Education syllabus in schools. In another study in Bomet County, Kipng'etich and Osman (2016) found that most of the teachers who had been assigned responsibility of teaching Physical Education were not trained in the pedagogy of Physical Education. Furthermore, none of the Quality Assurance and Standards Officers (QASOs) in the county was an authority in Physical Education. Due to heavy workloads, teachers who were assigned Physical Education lessons only dropped students off and returned at the end of the lesson, leaving them to do "their own thing" in the field. Training and professional qualification of adequate sports teachers should thus be at the top of the priority list when we are thinking of implementing the new curriculum at the Senior Secondary School level. Sports science, being a new entry in the school curriculum does not have already existing trained and qualified teachers. With new and different subjects being offered to pupils, teachers will need to be prepared to adapt to this new curriculum so as to meet the requirements, interests and talents of every child.

The content competency-based curriculum has been designed with a view of equipping the learners with relevant knowledge that emphasizes on technology, innovation and entrepreneurship (Republic of Kenya, 2017). The new curriculum therefore requires schools to provide infrastructure like, classrooms, ICT labs, resource centers, sporting fields, water equipment and electricity. The relevant infrastructure should be provided sufficiently so as to maximize delivery quality and interaction with the learning environment. Adequacy of instructional materials and physical facilities has a direct effect on quality of teacher preparation and subsequent delivery (Likoko, Mutsotso, & Nasongo, 2013). However, research has shown that many schools lack the requisite sports equipment and physical facilities. Where present, the facilities are not proportional to the school enrolment (Muthima, Udoto, & Anditi, 2016). Most schools concentrate on infrastructural facilities that have a direct link to school's examination results, such as school library, science laboratory and school agriculture farm at the expense of non-examinable subjects. It is high time that Senior Secondary Schools hoping to enroll students for careers in Arts and Sports Science to start making the requisite arrangements to acquire requisite facilities and equipment that will aid them in offering and delivering the subjects in the most efficient and standard manner.

Curriculum reform is an expensive exercise that requires continuous funding. Mkandawire (2010) argues that inadequate funding is a serious impediment to curriculum implementation in learning institutions. Workers have to be paid. Resources and facilities have to be purchased and maintained. The curriculum implementation process should thus be sufficiently funded to secure the relevant resources adequately and timely. Limited funding often waters down the quality of an otherwise good curriculum. Such need for securing funding, and the view of leveraging on the capabilities, resources and experiences of others in order to create a successful program is what necessitates partnerships. McQuaid (2000) as cited in Houlihan and Lindsey (2008) identifies three main reasons for promoting partnerships. First partnerships create increased pool of resources such as finance, expertise and administrative capacity. Secondly partnerships improve effectiveness and efficiency. Lastly partnerships enhance legitimacy through involvement of a broader range of stakeholders. These justify the need for partnerships and linkages between

stakeholders in the fields of education and sports in implementation of sports career pathway in schools.

Partnerships and linkages between stakeholders in the fields of education and sports would be necessary in the designing and / or fine-tuning of the curriculum for learners. According to Mwisukha, Rintaugu, Kamenju and Mwangi (2012), the sports and Physical Education curriculum in Kenya's educational institutions under 8-4-4 system lacked uniformity and progression of activities. In addition, public primary and secondary schools did not have a standard or uniform criterion for Physical Education evaluation, since it was a non-examinable subject. Such gaps require that the Ministry of Education and that of Sports, together with sports state corporations such as Kenya Academy of Sports (KAS), which is already engaged in the theory and practice of sports, partner with the Kenya Institute of Curriculum Development (KICD) to develop and / or fine-tune the sports curriculum for learners. This would ensure that the curriculum is relevant, standard, uniform, practical and realistic.

Additionally, stakeholders in fields of education and sports would need to partner with universities and teacher training colleges for effective teacher training. Mwisukha, *et al*, (2012) observed that Kenya lacked uniform national standards for preparing professional teachers to teach sports and Physical Education starting from pre-primary to secondary schools in Kenya. This points to the need of developing a uniform sports science curriculum to be used in universities and all teacher training institutions. Sports organizations equipped and involved in identifying, nurturing and developing sports talent among youth would be needed to partner with teacher training institutions for effective integration of talent development into the teacher-training curriculum, in order to enable teachers to identify, nurture and develop sports talent among the learners. In a study to investigate how partnerships for Physical Education worked between primary schools and sports coaches in north-west England, Smith (2015) found that sports coaches were used to deliver aspects of Physical Education in state primary schools in England by accommodating the coaches within the existing curricular arrangements. Similar arrangements would go a long way in ensuring that teachers are appropriately equipped by practicing experts in the fields of sports. This would further help to impart and / or improve the teachers' technical skills, which are very key in sports. Nationally recognized sports agencies may also liaise with teacher training institutions to administer and co-ordinate sports courses.

7. RECOMMENDATIONS

While the Competency Based Curriculum (CBC) has embraced sports in the academic talent pillar in both the Senior Secondary School and the university education curriculum, the challenges that have been identified should be addressed to prepare for the implementation of this curriculum. The structures that should be in place include: flexible academic schedule to accommodate sports training and competitions; remedial classes to cover academic content missed during international sports training and competitions; scouting for talents for admission; and provision of sports scholarships and involvement of the Ministry of Sports and other external agencies in financing elite sports in the universities. Sports structures in the universities need to hire and train competent and qualified personnel in management and training in elite sports before the implementation of Competency Based Curriculum (CBC) in both the Senior Secondary School and the university education system in Kenya.

A new educational innovation requires continuous research to avoid unnecessary mishaps due to implementation of ill-researched policies. McNeal, *et al*, (2014) opine that the entire curriculum process from conceptualization to implementation and evaluation must be guided by research. Research would also ensure that there is a seamless transition of learners from class to

the world of career / work, linking the young graduates into existing career opportunities. The Ministry of Education thus needs to partner with national sports organizations, institutions of higher learning, and other stakeholders to carry out continuous research in sports and education in order to stimulate sport transformation and development.

Mkandawire (2010) indicated that inadequate funding was the major impediment to curriculum implementation in learning institutions. Therefore, partnerships are also necessary for funding. Funds are very necessary in effecting any curriculum change. Workers have to be paid, and resources and facilities have to be purchased and maintained. Research also requires funding. With increase in demand for manpower, most of the funds allocated to the education sector is channeled to salaries and very little is left for other important aspects in the curriculum implementation such as in-service training, and the continuous professional growth. There is thus need for partnerships with local and international finance institutions in order to create an adequate pool of financial resources. A well-researched, designed, implemented and funded educational program is bent on achieving unprecedented success.

Over the years, sports and Physical Education have been viewed as comparatively non-intellectual and non-essential, co-curricular or extra-curricular activity that only complements the regular school curriculum. Hence, they receive minimal attention, resources, infrastructure, professional development and funding. The new curriculum reform however, has sports not as a co-curricular activity, but as an integral part of the main curriculum and a career pathway for Kenyan children. Thus, there is need for a paradigm shift, preparedness and partnerships among stakeholders. Successful implementation of the new curriculum reform requires creation of a combined effect among the stakeholders in the education and sports fields in order to effectively focus sports as a career pathway in the school curriculum. There is need to create a multi-sectoral partnerships between Ministry of Education (MoE) and all key stakeholders in Sports, so as to actualize realization of the Sports Pathway. This will not only provide a solid pillar for supporting development, implementation and evaluation of the new curriculum for the Sports Pathway, but will also provide a seamless transition of learners into the career marketplace. The Kenyan government should also create strategies geared towards attitude change of learners, teachers and the larger society, so as to enhance perception of sports pedagogy as needful and useful. It should further work towards timely and adequate mobilization and acquisition of physical, financial, instructional and human resources in readiness for implementation of Senior Secondary Education curriculum. Lastly, the government should strategically position the Kenya Academy of Sports (KAS) as a strategic entity to professionalize sport talent development by availing finance and technical resources.

8. CONCLUSION

Physical Education and sport is a very important aspect of the educational and teaching processes, as it has many positive effects on the individual. However, in many countries including Kenya, the teaching of Physical Education has faced many challenges including reduced teaching time, severe shortage in equipment, negative view of the subject by teachers as well as students and guardians among others. The implementation of the new education curriculum in Kenya that identifies sports as a career pathway can easily face similar challenges if corrective mechanisms are not put in place to ensure that the challenges are countered. Time is running out and soon we will have the first cohort of learners joining Senior secondary Schools ready to take on Sports Science as a career pathway. The government needs to move fast and ensure that this transition will be seamless and that the Senior Secondary Schools will be equipped in both personnel and infrastructure to absorb and cater for the needs of these learners.

To address the anticipated challenges before implementation of sports programs in the talent pillar as envisioned by Competency Based Curriculum in the university education in Kenya, academic, financial, sports training, competition opportunities and management structures should be addressed. The academic structures must put in place with flexible academic schedules to accommodate training and competitive sports opportunities for the talented students. The financial structures must be in place so as to provide adequate sports funds to support sports programs in the universities. Further, training and competition in elite sports must be supported through adequate facilities and equipment, qualified trained personnel in elite sports, and creation of competition opportunities. The management structures must address admission policies for talented students, sports scholarships and support system for both academics and sports programs in the university education in Kenya.

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