

SUSTAINABLE DEVELOPMENT THROUGH EDUCATION ATTAINMENT

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Abstract

Sustainable development was introduced in 1987 as a concept by World Commission on Environment and Development (WCED), also known as Brundtland Commission. The commission defined Sustainable Development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” The United Nations Decade for Education for Sustainable Development (DESD, 2005-2014) encouraged innovative approaches in education in order to contribute to the societal change towards sustainability. In 2015, the United Nations General Assembly approved 17 Sustainable Development Goals (SDGs) with the aim of fostering organizational operationalization and integration of sustainability by addressing the current and forthcoming stakeholders’ needs and ensure a better and sustainable future for all within a balanced economic, social, and environmental dimension of sustainable development. Education for Sustainable Development (ESD) forms part of target 4.7 of Sustainable Development Goal 4, which by 2030, seeks to ‘ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles. The tragedy triggered by the COVID-19 pandemic presents the world with an incredible opportunity to build back better and focus more on technological and scientific aspects of sustainable development. Teaching and learning have been impacted in a way that traditional face to face learning is no longer the first option. Institutions of learning must do more to ensure their output in terms of graduating students having the necessary competences and skills needed to solve the ever-increasing developmental challenges of the 21st century. Education for sustainable development is only possible if learning institutions emphasise competences and skills geared towards values and sustainability such as: Learning skills (Critical Thinking, Creative Thinking, Collaborating, Communicating), Literacy Skill (Information Literacy, Media Literacy, Technology Literacy), Life Skills (Flexibility, Initiative, and Social Skills, Productivity, Leadership). Acquisition of these skills promotes research and provides information needed to solve sustainable developmental challenges emanating from decisions made by humans. This paper mirrored the pivotal role played by education attainment in sustainable development. Secondary sources of data used included journals, publications by: United Nations agencies such as United Nations Educational, Scientific and Cultural Organisation (UNESCO); Sustainable development goals report; and Education for All (EFA). The framework for the research was based on Dummont, Instance & Benavides learning theory. The study revealed that education attainment is the central nervous system upon which sustainable development goals as envisioned in vision 2030 can be realized. It was concluded that for sustainable development, education attainment must be a priority by all learning institutions and they should be funded fully to ensure quality service delivery. With the world having become a global village, it was further recommended that states/ or nations of the world adopt teaching and learning methods that promote development of 21st century skills.

Keywords: Educational attainment; sustainable development; sustainable development goals, education for sustainable development.

Introduction

Sustainable Development (SD) was first defined as “the development that meets the needs of the present without compromising the ability of future generations to meet their own needs,” in the document “Our Common Future” by the United Nations Commission on Environment and Development (Brundtland Commission). SD aims to address humanity’s aspirations of a better life within the limitations imposed by nature. Sustainable development is manifested through social development, economic development, environmental conservation, technological development and scientific innovation (Ayichew, 2017). Ayichew (2017) posits that Social, economic and environmental components are considered key components of sustainable development. Except for technological and scientific innovation, the other three components are considered as key components of sustainable development and are sometimes referred to as, “the x-axis, y-s, z-s of sustainability” or simply put, “three axes of

sustainability”. The three axes of sustainability are integral and collectively buttress sustainable development”. “SD include issues pertaining to poverty, biodiversity conservation, agriculture, capacity-building, climate change, desertification and drought, disaster reduction and management, energy, finance, forests, fresh water, health, international law, poverty, sanitation, toxic chemicals, waste management” (Yadav, 2016).

Countries across the globe have for a long time relied on education as an engine of growth in areas of; socio-economically, environmentally, technologically and scientifically (Gbenu, 2012). In other words, sustainable development begins with education whereby educational attainment is used to furnish the changes needed for society to attain tenable state by using Sustainable Development Goals (SDGs) as the dictate for state sustainability (UNESCO, 2014). According to UNESCO (2014), the international community in the year 2000, signed up on Millennium Development Goals (MDGs), and recognized education as an essential gateway for persons to attain their full potentialities. Unfortunately, the international community is yet to feel the full impact of education as fuel for growth.

According to Yadav (2016), education involves teaching and learning certain skills that are deemed important in making an individual to be able to function in society in a way that is productive. During teaching and learning, skills such as knowledge, positive judgment and well-developed wisdom are imparted in the learner. Yadav goes on to state that through teaching and learning, cultural practises are able to be passed on from one generation to another. The basic aim of the education system for sustainable development is ‘education of a new man’, ‘a man of a sustainable type of thinking’. Education in its contemporary development should be aimed at the future, should “foresee” and form in a certain way and satisfy needs of future generations of people. “Education is critical for promoting sustainable development and improving the capacity of people to address environment and development issues. It is critical for achieving environmental and ethical awareness, values and attitudes, skills and behavior consistent with sustainable development and for effective public participation in decision making”.

Educational attainment is important because of pressure resulting from the world becoming a global village through digitization. Cultures mixing, economies growing, and communication speeding up leaves the world increasingly complex and uncertain. Besides, mankind is always manipulating the planet’s balance of nature through various human activities which are existential threat to life on planet earth. Considering, the Anthropocene period that has been shaped by humanity, students have an increasing demand for education that goes beyond teaching knowledge and skills just to find a job. Students need new perspectives to be able to understand the rapidly changing world they live in. Besides, they need to participate in this world in an effort to help alleviate poverty, safeguarding the environment and creating altogether communities. To realise this ambition, a new approach to education is needed, which is sustainability education which provides the alternative approach that aims to educate learners as world citizens for maintainable growth. Through educational attainment change makers are produced, rather than passive consumers of knowledge.

Statement of the Problem

Majority of educational problems in Kenya can be surmounted through finance but the government seems to be politicizing the issue of funding the educational sector (Amutabi, 2003). Quality education, the fourth goal of the SDGs cannot be attained with these nonchalant attitudes of funding education, therefore, the question is can Kenya utilize quality education to the extent of using it to attain the United Nations Agenda 2030?

The quality of education in the case of Kenya is regretful, for example, the Competency Based Curriculum (CBC) system which has been implemented up to grade six is experiencing serious funding challenges (Asego, 2021). The physical facilities and teachers necessary to successfully implement the system are inadequate (Muthima, Udoto & Anditi, 2016; Onyango, 2020). The financial pressure that learners have piled on their parents is enormous and nobody knows for how long the parents will endure the demands of the new system (People Team, 2021). The challenges facing CBC system in Kenya needs to be addressed so that the country can achieve SDGs 2030. The full implementation of the CBC in Kenya will help learners at all levels of education to rediscover their gifts and talents, capabilities and abilities and interests early in life and this will make them to become useful, productive, enlightened and better prepared.

Objective of the Study

To examine the relationship between education attainment and Sustainable Development

Data Sources

The sources of data collected in this study was secondary data from pertinent and associated documents from bodies such as the United Nations and its agencies (United Nations Development Programmes (UNDP), United Nations Education, Scientific and Cultural Organization (UNESCO)) and Papers from Conferences on Education. In addition, relevant literatures from Journals and Annual Reports were embraced in advancing and strengthening this study.

Theoretical Framework

This study was anchored on the learning theory of Dumont, Instance & Benavides (2010). The theory explains that the learning setting shapes the level of education attainment. The learning setting in this theory implies facilities used for learning, the material and human resources available, and the motivation as well as interest of the learners. The theory stressed further that quality learning will be achieved when there is improvement and enhancement in the resources that are available for learning or when the resources are utilized. The theory also stipulated that; teachers must understand the content to be taught in order for them to deliver quality education. The implications of this theory are that educational stakeholders globally must develop strategies and settings for quality education. The theory was adopted because of its relevance to the major variables in the study (education attainment and sustainable development).

Conceptual Framework

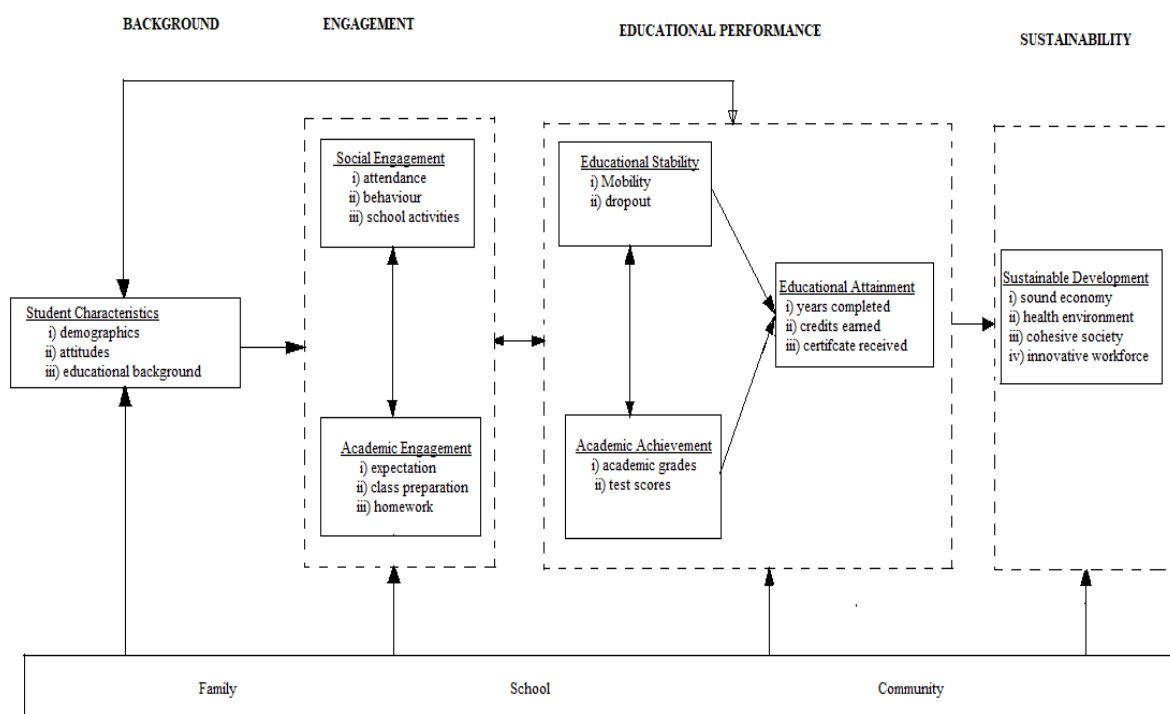


Figure 1: Conceptual Framework

Educational attainment is influenced directly by family, school and community and indirectly through student characteristics which influences the student’s social and academic engagement that is reflected in education stability and academic achievement leading to educational attainment which in turn influences sustainable development. However, sustainable development has a direct bearing to the family, school and community.

Sustainable Development

The concept of sustainable development emerged as a response to a growing concern about human society’s impact on the natural environment. The concept of sustainable development was defined in 1987 by the Brundtland Commission (formally the World Commission on Environment and Development) as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (Brundtland, 1987). This definition acknowledges that while development may be necessary to meet human needs and improve the quality of life, it must happen without depleting the capacity of the natural environment to meet present and future needs. The sustainable development movement has grown and campaigned on the basis that sustainability protects both the interests of future generations and the earth’s capacity to regenerate. At first it emphasised the environment in development policies but, since 2002, has evolved to encompass social justice and the fight against poverty as key principles of sustainable development.

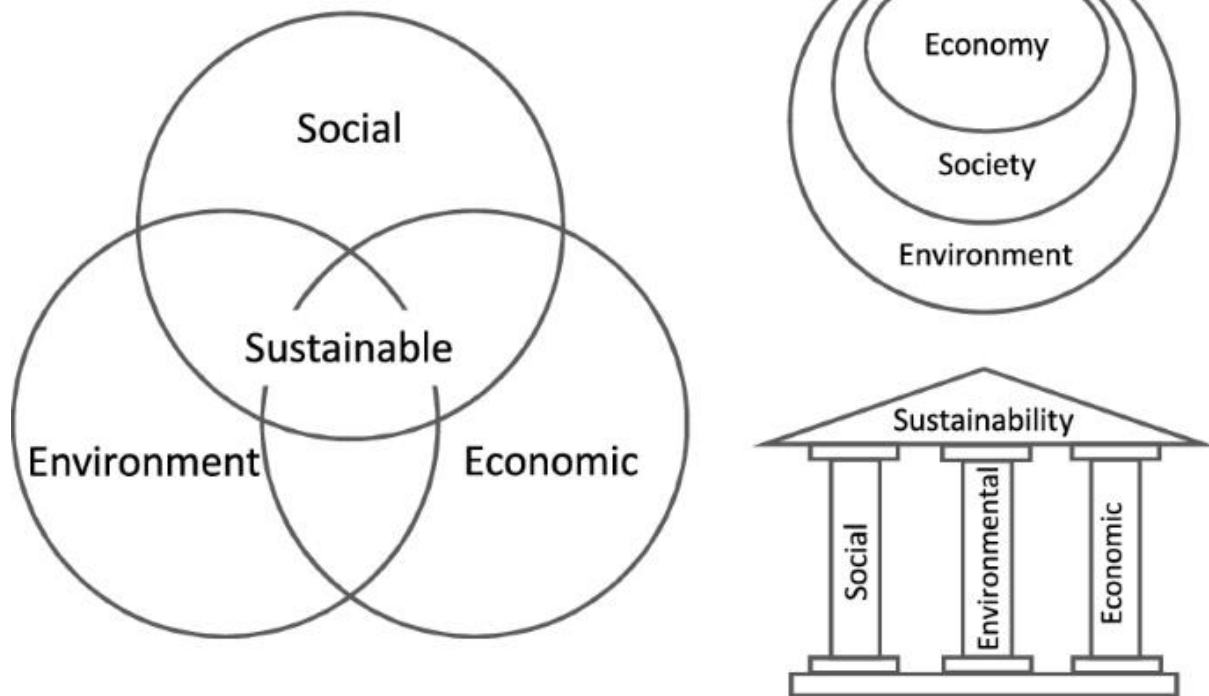


Figure 2: Three Pillars of Sustainability

Source: *Three pillars of sustainability: in search of conceptual origins*

Sustainable development, as already noted, was formally initiated for the world community in the year 1992. In it, education occupies an important place. It is linked with environmental themes. The tragedy triggered by the COVID-19 pandemic presents the world with an incredible opportunity to build back better. Academic institutions, be they colleges, schools or universities, must double their efforts to ensure that the world’s policymakers and leaders are provided with the information they need to solve the increasingly complex developmental problems. Thus, education for sustainable development promotes research and provides information needed to solve sustainable developmental problems arising out of human-made decisions. Education as an investment in human resources plays an important role among the factors, which contribute to sustainable development.

Sustainable Development Goals

In 2015, the General Assembly of the United Nations (UN) formally adopted “The 2030 Agenda for Sustainable Development,” which provides a framework for “peace and prosperity for people and the planet, now and in future”. All United Nations Member States, after a participated process involving multiple stakeholders, agreed upon the Sustainable Development Goals (SDGs), which can be used to provide an indication and measure of progress towards the main objective of sustainable development. The SDGs represent a shared expression of stakeholder needs at a global level balancing economic, social, and environmental development.

Following next are sustainable development goals as agreed upon by united nations member states: SDG 1- end poverty in all its forms, everywhere; SDG 2- end hunger, achieve food security and improved nutrition, and promote sustainable agriculture; SDG 3- ensure healthy lives and promote well-being for all at all ages; SDG 4- Ensure inclusive and equitable quality education and promote, lifelong learning opportunities for all; SDG 5- Achieve gender equality and empower all women and girls; SDG 6- Ensure available and sustainable management of water and sanitation for all; SDG 7- ensure access to affordable, reliable, sustainable and modern energy for all; SDG 8- promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all; SDG 9- build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation; SDG 10- reduce inequality within and among countries; SDG 11- make cities and human settlements inclusive, safe, resilient and sustainable; SDG 12- ensure sustainable consumption and production patterns; SDG 13- take urgent action to combat climate change and its impacts; SDG 14- conserve and sustainably use the oceans, seas and marine resources for sustainable development; SDG 15- protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation, and halt biodiversity loss; SDG 16- promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable and inclusive institutions at all

levels; SDG 17- strengthen the means of implementation and revitalize the global partnership for sustainable development

Rationale for Sustainable Development

Sustainable Development is a complex concept with its origin in the natural and social Sciences that has been developed through international dialogue in response to the challenges facing the world today. A core principle behind sustainable development is the idea that economic, social and environmental conditions play a major role. Education Sustainable Development has five components; knowledge, skills, perspectives, values and teaching issues which are to be addressed in a formal curriculum for sustainable development. The basic vision of the United Nations Decade for Education for Sustainable Development (DESD) is a world where everyone has the opportunity to benefit from education and learn the values, behavior and life styles required for a sustainable Yadvav Annals of Education Vol. 2(2): June 2016 future and for positive societal transformation. Some of the proposed DESD objectives are to facilitate links and networking, exchange and interaction among stakeholders in ESD; provide a space and opportunity for refining and promoting the vision of, and transition to sustainable development through all forms of learning and public awareness; foster increased quality of teaching and learning in education for sustainable development; develop strategies at every level to strengthen capacity in ESD.

Education Attainment

According to UNESCO (2008) African countries need to review their school curriculum and programs if they have to build their young generations to survive in the world of today that is characterized by advancements in technology, science, everyday innovations and Information Communication Technology (ICT). Thus, UNESCO also stressed that education is needed by African countries to achieve the SDGs 2030. UNESCO in making reference to the education for all (EFA) declaration adopted in Jomtein and reported in Gbenu (2012) declared that:

Every person shall be able to benefit from educational opportunities designed to meet their basic needs, these needs comprise both essential learning tools (such as literacy, oral expression, numeral and problem solving) and the basic content (such as knowledge, skills, values and attitudes) required by human beings to be able to survive, to develop their full capacities, to live and work in dignity, to participate fully in development, to improve the quality of their lives, to make informed decisions and to continue learning. The scope of basic learning needs and how they should be met varies with individual countries, cultures and inevitably, changes with the passage of time (Jomtien Declaration, 1990).

Education for Sustainable Development (ESD)

Education for Sustainable Development (ESD) is simultaneously a sub-field of education and a conceptual tool to aid policy makers in authoring educational policies that take into account the present environmental, societal and economic challenges. It is an education that empowers learners to take informed decisions and responsible actions for environmental integrity, economic viability and a just society, for present and future generations, while respecting cultural diversity. ESD promotes holistic and transformational education. This type of education addresses learning content and outcomes, innovative pedagogy and 'learning by doing', and uses a whole-school approach to engage communities in achieving sustainable change. ESD is placed at the centre of the 2030 Sustainable Development Agenda and has been widely recognized as a key enabler of sustainable development and an integral element of quality education. It forms part of Target 4.7 of Sustainable Development Goal 4, which by 2030, seeks to 'ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles...' as well as cutting across all the other Sustainable Development Goals (Tang, personal communication, 2018).

Integrating education into sustainable Development

With the adoption of the SDGs, the role of education as instrument within the global debate on sustainable development has been given renewed attention (Leicht, Combes, Byun, & Agbedahin, 2018). Education promotes development of knowledge and skills required to achieve sustainable development (Unit-10, n.d; Nevin, 2008). It, encourages promotion of economic well-being, social equity, democratic values and much more. Education for Sustainable Development (ESD) enables people and citizens to learn as to how to preserve earth resources which are limited in availability. The ESD has the objective of empowering present and future generations to meet their needs using a balanced and integrated approach to the economic, social and environmental dimensions of SD.

The adoption of the 2030 Agenda for Sustainable Development has provided fresh impetus for Education for Sustainable Development (ESD) and a very favourable environment in which to scale up the implementation of ESD. The Agenda sets an ambitious universal education programme with the adoption of Sustainable Development Goal 4, which aims to ‘Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all’ (UN 2015). Under Goal 4, it is widely recognized that one of the most ambitious, interesting and challenging targets is Target 4.7, which aims to:

“By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through Education for Sustainable Development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and nonviolence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development”

In addition, ESD can serve as a means to pursue the achievement of all the Sustainable Development Goals (SDGs). In support of this perspective, during its 74th session, the Second Committee of the UN General Assembly adopted a resolution on ESD in the framework of the SDGs (A/C.2/72/L.45) in which ESD’s role as ‘an integral element of the SDG on quality education and a key enabler of all other sustainable development goals’ was explicitly affirmed

Education Attainment and Sustainability Development

Education attainment affects sustainability development in three broad areas that follow:

1. **Implementation:** An educated citizenry is vital to implementing informed and sustainable development. In fact, a national sustainability plan can be enhanced or limited by the level of education attained by the nation's citizens. Nations with high illiteracy rates and unskilled workforces have fewer development options. For the most part, these nations are forced to buy energy and manufactured goods on the international market with hard currency. To acquire hard currency, these countries need to engage in international trade; which involves exploitation of natural resources or conversion of lands from self-sufficient family-based farming to cash-crop agriculture. An educated workforce is key to moving beyond an extractive and agricultural economy towards knowledge-based economy.

2. **Decision making:** good community-based decisions- which will affect social, economic, and environmental well-being- also depend on educated citizens. For example, a community with an abundance of skilled labour and technically trained people can persuade a corporation to locate a new information-technology and software-development facility nearby. Citizens can also act to protect their communities by analysing reports and data. For example, citizens who were concerned about water pollution reported in a nearby watershed started monitoring the water quality of local streams.

3. **Quality of life:** Education is also central to improving quality of life. Education raises the economic status of families; it improves life conditions, lowers infant mortality, and improves the educational attainment of the next generation, thereby raising the next generation's chances for economic and social well-being. Improved education holds both individual and national implications. ESD is future-oriented education that fosters understanding of the interconnectedness of ecology, economics and social equity. The five major components of ESD that guide and motivate people to seek sustainable livelihoods, participate in a democratic society, and live in a sustainable manner are as follows:

1. **Knowledge:** People need basic knowledge from the natural sciences, social sciences, and humanities to understand the principles of SD. Knowledge based on traditional disciplines supports ESD.

2. **Values:** They are an integral part of ESD, with respect at the centre: respect for present and future generations, respect for cultural difference and diversity, and respect for the natural environment. Values taught in school need to reflect the larger values of the society that surrounds the school. Social justice is also a central part of ESD, since it includes respect for the traditions and religions of other communities, meeting basic human needs, and concern for the rights, dignity, and welfare of all people.

3. **Issues:** Teachers should be equipped to help students identify and think about the complexities of issues from the perspectives of many stakeholders. Older pupils and university students need to acquire skills to analyse issues and the proposed solutions to them, understand the values underlying opposing positions, and analyse conflicts arising from those issues and proposed solutions.

4. **Perspective:** The ability to consider an issue from the view of different stakeholders is essential to ESD. Every issue has a history and a future. Looking at the roots of an issue and forecasting possible futures based on different scenarios are part of ESD, as is understanding that many global issues are linked. For example, over-consumption of such consumer goods as paper leads to deforestation, which is thought to be related to global climate change.

5. **Skills:** ESD must give people practical skills that will enable them to continue learning after they leave school, to have a sustainable livelihood, and to live sustainable lives. Especially students, to think, act and re-act as responsible citizens and find sustainable solutions to real life issues, at the local, national and international level.

Conclusions

Sustainable Development is development that meets the need of the present without compromising the ability of future generations to meet their own needs, while education for sustainable development is an education that includes key sustainable development features into teaching and learning. ESD requires participatory teaching and learning methods that motivate learners to change their behaviour. In addition, ESD empowers learners through promotion of competencies such Learning skills (Critical Thinking, Creative Thinking, Collaborating, Communicating), Literacy Skill (Information Literacy, Media Literacy, Technology Literacy), Life Skills (Flexibility, Initiative, and Social Skills, Productivity, Leadership)

REFERENCE

Agbedahin, A. V., Leicht, A., Combes, B., & Byun, W. J. (2018). Issues and trends in ducation for Sustainable Development UNESCO.

Amutabi, M. (2003). Political interference in the running of education in post- independence Kenya: A critical retrospection, Vol.23. Retrieved from [http://lst-iiiep.iiiep-unesco.org/cgi-bin/wwwi32.exe/\[in=epidoc1.in\]/?t2000=019893/\(100\)](http://lst-iiiep.iiiep-unesco.org/cgi-bin/wwwi32.exe/[in=epidoc1.in]/?t2000=019893/(100)).

Asego, N. (2021, December 28). Move Quickly to Address Pressing Challenges in the Education Sector. Standard MediaGroup. <https://www.standardmedia.co.ke/editorial/article/2001432961/move-quickly-to-address-pressing-challenges-in-the-education-sector>

Ayichew, F. K (2017). Re: What variables should we consider in assessing sustainable development of a city?. https://www.researchgate.net/post/what_variables_should_we_consider_in_assessing_sustainable_development_of_a_city/5968b7685b49523b0c39a1b4/citation/download.

Dumont, H.D., Istance, D. & Benavides, F. (2010). The nature of learning using research to inspire practice. Paris: OECD Publishing.

Education for All (EFA), (2005) Understanding educational quality. EFA Global monitoring report. Retrieved from www.unesco.org>chapterI 31/07/2019.

Gbenu, J.P. (2012). State of Nigerian secondary education and the need for quality sustenance. *Greener Journal of educational research*. 2(1), 7-12.

Jomtien Decaration (1990). World Declaration on Education for All: Meeting Basic Learning Needs. Retrived from <https://bangkok.unesco.org/sites/default/files/assets/ECCE/JomtienDeclaration.pdf>

Leicht, A., Heiss J. and Byun, W. J. (2018, p. 25- 38). From Agenda 21 to Target 4.7: The development of Education for Sustainable Development. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000261801>

Muthima, N.W., Udoto, M. O., & Anditi, Z. O. (2016). Primary school teachers' perceptions of adequacy and quality of physical facilities in public primary schools under Free Primary Education. *Journal of Education and Practice*, 7(15). Retrieved from <https://files.eric.ed.gov/fulltext/EJ1103183.pdf>

Nevin, E. (2008). Education and Sustainable Development. Retrieved from <https://www.developmenteducationreview.com/issue/issue-6/education-and-sustainable-development>

Onyango, P. (2020, May 15). TSC says Kenya in dire need of 50,000 teachers. The Standard. <https://www.standardmedia.co.ke/education/article/2001371384/kenya-short-of-50000-teachers-says-state>

People Team (2021, September 20th). Cost and time factors weighing down CBC system, say parents. People Daily Newspaper. Retrieved from <https://www.pd.co.ke/author/people-team-2/>

UN (2015). The 2030 Agenda for Sustainable Development. United Nations UNCED. (1992). Agenda 21. Retrieved from <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>

UNECE. (2016). Ten Years of the UNECE Strategy for Education for Sustainable Development. Retrieved from <https://sustainabledevelopment.ece-trans-wp15-2016-21e>

UNESCO (2014). Sustainable Development begins with Education: How education can contribute to the proposed post-2015 goals. <https://en.unesco.org/gem-report/sustainable-development-beginseducation#:~:text=For%20more%20than%20....>

Unit-10 (n.d). Role of education in sustainable development. Retrieved from <https://egyankosh.ac.in/bitstream/123456789/77376/1/Unit-10.pdf>

United Nations. (2002). Report of the World Summit on Sustainable Development. Retrieved from <https://sustainabledevelopment.un.org/milestones/wssd>

Yadav. A. (2016). Role of Education in Sustainable Development of Modern India. *Annals of Education*,2(2), 80-84. <http://www.crsdindia.com/aoe.html>