Review Article

Skills Development as an Integral Part of Lifelong Learning. A Kenyan analytical review

Abstract:
This paper discusses the integration of skills development to a continuous skill acquisition spectrum. Skills development and processes in Kenya are examined through policy development and delivery, and the need for continuous learning acknowledged and demonstrated. Lifelong education and training is well articulated and discoursed alongside the benefits that can be accrued from it. Three models anchor lifelong learning and training and are discussed herein and their contribution to the topic justified. These models are: Behaviourism, Cognitivism and Constructivism. Some of the accrued benefits include: productivity, employment creation, sustainability, structural changes, domestic growth, social integration among others.

KEYWORDS: Lifelong learning, skills development**,** Behaviourism, Cognitivism, Constructivism, Kenya

Introduction

Globally, skills development is considered an essential prerequisite for productive employment. Development in skills is an important means for increased productivity, private-sector development, inclusive economic growth and poverty reduction. This is in realization that to create wealth in a sustainable way, economic diversification and structural change towards high productivity sectors must be well managed (Tiveta, 2018). A skilled and more adaptable labour force that can spur domestic and foreign investment is an essential component in the learning and development processes of a country. To link skills development to the broader education, employment, growth and development it is essential to ensure relevance, policy coherence, coordination and alignment to the macro environment (Billet, 2008).

Studies show that for effective, sustainable approaches to workforce development and employment a combination of employable skills, especially for the youth must be given priority (Ngure, 2018, Nyerere, 2009, Billet, 2008). Youth unemployment, resulting from mismatch between the supply of the education system and labour market needs, could largely be addressed through adequate skills development. This could be done within the context of a future-oriented, flexible and holistic education system that prepares students, and provides opportunities, for lifelong learning.

Justification of this paper.

In the Sustainable Development Goal number 4 (SDG 4) that deals with education among others, lifelong learning features prominently as a vital link in skills acquisition and development (Kanwar, Balasubramanian, & Carr, 2019). Lifelong learning, covers non-formal, informal and formal learning, and therefore influences a lot of people who have trained in different fields. The rapid and unforeseen technological advances necessitates that all these learners acquire continuous upskilling and reskilling to keep up with the fast industry changes. Additionally, the above authors envisage that lifelong learning will enhance skill sets, improve the economy, social cohesion, democracy, build global citizenship and

maintain peace. There is a growing consensus that education and training are generally inseparable, "especially as the notion of a job for life is being replaced by the necessity for lifelong learning" (UNESCO/ILO, 2002, p. 3).

Kenya government policy documents such as the Kenya Educational Support Sector Programme (KESSP) and the Kenya Vision 2030, underlined challenges and constraints that confound the skills acquisition and development sector (GoK, 2007). The KESSP document further highlighted issues and constraints faced in skills' acquisition.

- inflexible and outdated TVET curriculum
- mismatch between the skills learned and the skills demanded by industries
- inadequate mechanism for quality assurance
- inadequate physical facilities for training, coupled with lack of sufficient modern equipment
- expensive training materials and textbooks
- low participation of private sector in curriculum design and development. (GoK, 2005, p. 213)

Lifelong learning can deal with some of these challenges such as an inflexible and outdated TVET curriculum, inadequate physical facilities for training, and, the mismatch between the skills learned and the skills demanded by industries. It is in this light that a review of relevant literature that touches on skills' acquisition and lifelong learning should be studied. Unfortunately, there are very few research articles that dwell exclusively on this vital topic, specifically in the Kenyan context. This analytical review aims to add to literature on lifelong learning in Kenya, and hopes that it can open debate on this sector. Researchers and education sector managers will find this analytical review vital as it portrays an important relationship between skills acquisition and learning.

Methodology

This research paper is a product of research in the area of skills acquisition and development both in Kenya and around the world. The researcher perused a large amount of literature from all over the world and then compared the practices therein and those within the country to come up with a critical review of literature touching on lifelong learning and skills acquisition in Kenya. The research was occasioned by numerous comments and assertions and a dearth in research on the subject area.

What is Skills Development?

Skills development generally refers to the productive capabilities acquired through all levels of learning and training (Johanson, & Arvil, 2004). It occurs in formal, non-formal, informal and on-the-job settings. Skills development enables individuals to become fully and productively engaged in livelihoods, and to have the opportunity to adapt these capabilities to meet the ever-changing demands of the economy and labour market. Many factors influence the acquisition of such capabilities, among them a quality lifelong learning system and a supportive learning environment (Billet, 2018).

Employable skills can be divided into four categories (Ngure, 2018, Nyerere, 2009, SIDA, 2018):

- *Basic and foundation skills*: These are acquired through the primary and secondary formal school system, or through non-formal and/or informal learning processes, for example,

active learning, oral expression, reading comprehension, written expression, ICT literacy, active listening. These skills are pre-requisites for acquiring further skills. They enhance the prospect of sustainable employment.

- *Transferable skills*: These include the abilities to learn and adapt, solve problems, communicate ideas effectively, think critically and creatively, and the ability to manage self and others. Transferable skills enable individuals to adapt to different work environments and to improve their opportunities for career-building.
- *Technical and vocational skills*: These are specialised skills, knowledge or know-how to perform specific duties or tasks, mainly in a professional environment. These include, but are not limited to, the traditional forms of technical and vocational education and training (TVET), skills acquired through the secondary level of the formal school system or through non-formal and/or informal learning processes.
- *Professional and personal skills*: These include individual attributes relevant to work such as honesty, integrity, reliability, work ethic, and judgement.

Skills Development in Kenya

Kenya's is classified as a lower-middle income country and its economy is among the fastest growing in Africa. With a 2020 gross domestic product (GDP) of USD95.5 billion and per capita income of USD1,816, the country is ranked the sixth largest economy in Africa and the third in sub-Saharan Africa (SSA) (GoK, 2020). Further, Kenya is the dominant economy in the East African Community (EAC) and the primary source of foreign direct investment (FDI) for some of the countries of the Community. Notwithstanding, the Economic survey notes that Kenya's economy remains weak, with a youth unemployment rate of 67 per cent (those aged 15-34 years) and an estimated 800,000 young people getting into the job market every year, most of them ill-prepared for the world of work. The failure to integrate so many people into the labour market is a threat to social cohesion and to national stability. The need to make the school-to-work transition more effective is therefore critical.

Further, the informal sector absorbs up to 85 percent of those unable to find wage employment, most of whom are in small scale agriculture (Ngure, 2013). The informal sector is probably a permanent feature of the Kenyan labour market for the foreseeable future, with the micro and small enterprises (MSEs) remaining the backbone of the economy (Nyerere, 2009). Skills development is shaped by this environment, hence reaching the informal sector with the requisite training will be increasingly important to poverty reduction.

A 2018 World Bank *Skills Towards Employment and Productivity (STEP) Household Survey* in Kenya reports that although there are incidences of the usage of foundational skills – such as reading, writing, or basic tasks on the computer – at their jobs, basic skills proficiency estimates for workers in formal wage jobs are considerably low (World Bank, 2018). The survey reveals that a vast majority of adults that have completed secondary levels of education remain functionally illiterate in English (with scores below level three out of five in the test). Even among tertiary levels of education, three in four are not, in fact, functionally literate.

The share of the Kenyan urban population who reported receiving any training (including on-the-job-training) is approximately 27 percent (GoK, 2020). Access to further training is linked to formal wage jobs which in turn is strongly correlated with the existing education level of the worker (Figure 1). This indicates that life-long learning for workers is path dependent – that is, higher education levels provide access to formal sectors where workers are more likely to continue to receiving ay training provided by employers.

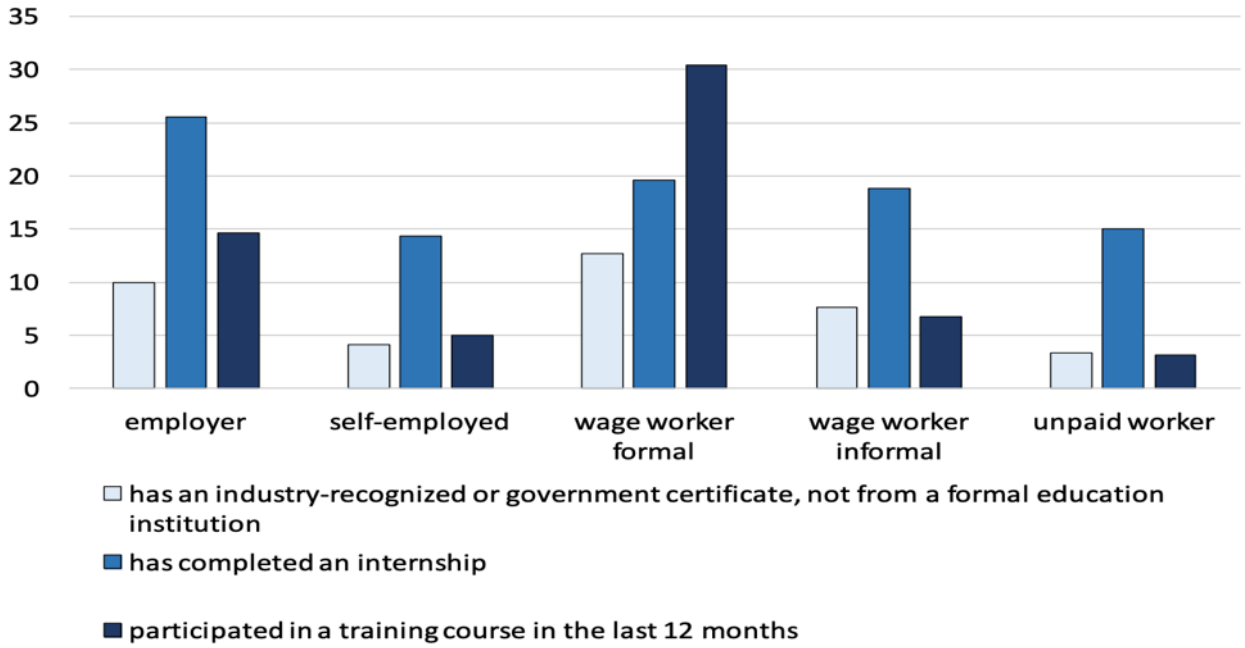

Fig 1 Access to Training by Occupational Status of the Worker *(* World Bank, 2018)

The Kenya Vision 2030 recognises the role science, technology and innovation (STI) play in a modern economy, in which new knowledge plays is central in boosting wealth creation, social welfare and international competitiveness. One of the four areas that the Vision identifies as critical to the effective exploitation of knowledge is "an educated and skilled population that can create, share and use knowledge well." (GoK, 2007). The Vision therefore prioritises the mainstreaming of STI in all the sectors of the economy through "carefully-targeted investments." This is expected to enhance efficiency, sustain growth and encourage value addition in goods and services. For this to happen however, additional investment in STI would be necessary and sectors that lag in the application of STI would need to be exposed to its benefits. Further given that Kenya's talent pool is still small and inadequately trained, the Vision proposes that measures be taken to improve the national pool of skills and talent through relevant training.

Another priority of the Kenya Vision 2030 is training for micro and small enterprises (MSEs) (Nyerere, 2009). Human resource development for SMEs is expected to be done through specialised training at community polytechnics, TVET institutions and on-the-job. Some specific human resource development interventions to be undertaken include:

- *Human resource development within employment:* Learning within employment will be institutionalised with emphasis on deepening of technological knowledge will be part of that effort. The Government will encourage collaboration with the private sector knowledge-sharing, particularly amongst MSEs.
- *Strengthening linkages:* Strengthening of linkages between the industry, technical training institutions and research institutions. The goal is to promote training that is demand-driven, and to ensure that technical and research institutions are responsive to the requirements of industry, particularly in the priority sectors.

Almost 12 years after the launch of Vision 2030, results of the STEP household survey showed that employers find the education system does not produce graduates with practical experience World Bank (2018). Moreover, the employers find that graduates from TVET institutes do not meet the required skills. Notably, over 40 per cent of firms say that the education system does not provide graduates with practical experience (Wachira et al., 2009).

Also, nearly 40 per cent of employers complain that graduates from TVET institutes do not meet the skills needs of the business.
Another constraint facing MSE is that training opportunities by employers in Kenya are limited (World Bank, 2018). A majority of formal firms are not investing in further skills development for their employees. For the urban population, the share who benefited from some kind of training, including on-the-job-training, is around 27 percent. Access to further training seems strongly linked to formal sector work, which in turn correlates strongly with education levels. These two findings call for an urgent evaluation of the effectiveness of the implementation of Vision 2030 as it relates to human capital, specifically its goal to develop "a skilful, productive, competitive and adaptive human resource base."

Models of Lifelong Learning

To understand lifelong learning, it is important to review theories that anchor the practice. Theoretically, lifelong learning is anchored on psychology theories which have contributed most to the understanding of this subject. Some of these theories include are behavioural, cognitivist and constructivist (Fleming, 2021). This section discusses the above theories to understand the foundations of lifelong learning.

Behaviorism theories

This theory is based on the theory of classical conditioning that was advanced by Pavlov at the beginning of the 21st century (Fleming, 2012). Pavlov performed experiments where he rang a bell and when the dog answered it was rewarded with food. With time the dog associated the bell with food and would salivate anytime the bell was rung irrespective of whether there was food or not. This theory was extended by Skinner (1974) who demonstrated that a learner would do something (or not do something) based on a promised reward or punishment. Skinner's experiment led to a model known as operant conditioning that advances concepts of reinforcement and behavioral change which are vital to understanding learning (Fleming, 2012). The conclusion to the experiments was that learning is a process of changing behavior. Thus, teaching and learning becomes a process of managing behaviors into achievable activities that can be sequenced to change behaviour. Lifelong learning is intrinsically motivated and the upskilling of skills and the productivity and performance associated with it satisfies the learners. The continual learning and it's associated satisfaction drive the learners, and this cycle is reminiscent of Skinner's dog's association with the bell.

Cognitivism

The Gestalt psychology model Originated from the work of Max Wertheimer and was developed at around the same time as behaviorism (Wagemans, 2015). This model views the mind as a whole, arguing that people's thinking impacts their behavior, and learning is expected to amalgamate the whole. The overall perception is dependant on the interaction among several factors: current environment, past experiences, thoughts, feelings, and needs. The model thus construed learning as an intuition or the growth of an understanding (Fleming, 2021). Thus, learning is an internal process involving understanding and reorganizing of experience along with the changing of mental constructs or how an individual understands the world. Later, cognitivists advanced that thinking is so critical that it should become its own field of study (*Lilienfeld, S.; Lynn, S. J.; Namy, L.; Woolf, N. 2010)*. One of the contribution of the Gestalt model is that it advances the individual's self-awareness,

authenticity, taking responsibility and perception as conditions for growth. For lifelong learning individual collectiveness is vital for development.

Constructivism

The constructivist model (also known as a constructivist view of learning or a constructivist approach) central idea is that the learning process is not just adding knowledge but also constructed through new meaning (Fleming, 2021). This model advances that individual's build new knowledge based on the foundation of what they have learned before. *Constructivism* therefore goes beyond the approach of the methods of the acquisition of information (as in behaviourist learning theory) to how the learners make meaning through the learning that they receive (Smith, 2012). Thus, internal processes play a key role in construction of events that evolve through interactions with the environment. *Constructivism* argues that knowledge has to be constructed, discovered, practiced, and validated by each learner emphasizing that the learners themselves have to develop meaning and learning through individual and social activity (T. Zhang et al., 2007).

One of the tenets of lifelong learning is the addition and building on the skills that have already been acquired either through formal or informal training. The *Constructivism* theory argues that meaning must be made through the learning that one acquires.

Skills Development and Lifelong Learning

It is undeniable that change occurs throughout our lives. Despite spending our earlier lives acquiring skills that prepare us for careers, these skills sometimes become obsolete as the world evolves. Additionally, technological changes calls for new skills that can be used to address growing competence needs. It is therefore vital that people learn how to become adaptive, generative and transformational to the environment so that they make incremental, useful and realistic changes in skills acquisition (London, 2012).

Studies show that improving the knowledge and skills of workers increases an economy's output of goods and services, and contributes to economic development. Education and training are therefore a form of investment. For the individual, the economic returns on this investment accrue in the form of increased earnings while for companies, the economic returns are realised through gains in productivity and profits (SIDA, 2018). For an economy, the returns are found in the expanded output of goods and services and economic growth.

Development of human capital not only leads to higher worker productivity, but also facilitates the absorption of workers into the economy and improves their job mobility (ability to move into more productive jobs and sectors) (SIDA, 2018). It also enhances business and technological innovation by improving the capacity of workers to apply and adapt existing knowledge and processes, as well as make new discoveries. Further, human capital is a major factor in determining the efficiency with which capital investments are utilised and production is carried out. The accumulation of human capital is even more important than physical capital accumulation. Weak human capital in the form of generally low levels of educational attainment can constrain the ability of workers to acquire new skills as markets change and thus slow both investment and market adjustments to new technology (Puerta, de Silva, & Rizvi, 2018).

Arrington and Lowe (2000) describes lifelong learning as a continuous education predisposition that can either be formal or informal. This learning is guided by a more learned or experienced person and it involves numerous learning opportunities that are intentional

and voluntary. Lifelong learning takes on a broader approach than education, is a personal process that individuals do, and it is context specific and occurs all the time as individuals think and act (Johanson, & Arvil, 2004). Some of this learning occurs through engagement in educational programmes and institutions. Ngure (2018) observes that there's need for lifelong VET providers who offer short, specific, tailored, onsite training courses that meet their immediate skill needs. Thus, a blend of initial vocational training and on-going refresher and updating courses are a requisite mix. In an education system that provides opportunities for lifelong learning, policy and practice provide every individual and community with a flexible and diversified range of useful learning and training options throughout his or her lifetime.

A skills-development strategy, as an integral component of a national education system for lifelong learning, can successfully link skills to productivity and employment creation while equipping individuals with skills to cope with life situations, for example work, active citizenship, and family life (Hallsworth, Parker & Rutter, 2011). Lifelong learning also ensures that the poor and most vulnerable groups in society also fully participate in and contribute to the development process, leaving no one behind (Ngure, 2013). In addition, development of modular pathways that support lifelong learning is especially useful given that more women and men from disadvantaged backgrounds including youth and persons with disabilities can get access to the trainings as one can register increased income, gain full and productive, employment and complete formal TVET (Neal, & Kuppuswami, 2020). Modular package instruction is especially important as lifelong learning being a dynamic process varies from one individual to another and is dependant on specific skills and personal motivation. In addition, London, (2012) opines that it is self-regulated, propagative and sometimes rely on challenging life events that may call for total overhaul of the skill set or an incremental/adaptive change that require transformational learning.

Conclusion

Today's managers, professionals, and functional experts understand that they must keep abreast with advances in knowledge and skills in all occupations. These leaders are expected to use technology and advancements to improve the quality of lives and strengthen social justice. Additionally, they must remain competitive as individuals, organizations, and the society as a whole. One important way of doing this is to seek and create growth within and between individuals through continuous training and development. This will make the people adapt and interact in functional and constructive ways and in the process result to growth in the organizations and the society.

The continual scientific and technological inventions and global dynamics have had a great effect on training and learning needs and instruction styles over the years (Life-long learning, 2009). Some of today's learning does not need an institution, a specific learning style or a time-frame. In addition, acquired knowledge should not be confined to a specific workplace, but can be applied and developed for multiple workplaces.

Today's worker may choose advanced educational opportunities for reasons such as economic competition, vocational and personal growth, professional development and job enrichment (Arrington & Lowe, 2008). The changing focus of life-long learning, calls for training providers to position themselves to take advantage of a population that requires continuous training outside the normal institution schedules. This will enhance accessibility by trainees who would otherwise not enroll in training programs, and improve the image of the country's T&D program.

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