

Vocational Education and Digital Literacy: Panacea for Sustainable National Development.

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Abstract

The Nigerian economy is saddled with myriad challenges namely graduate unemployment, crimes, youth restiveness, multidimensional poverty, and other social vices that have inhibited sustainable national development. Thus, vocational education is adjudged as the education that inculcates specific trade, career, or occupation to the learners to enhance the employability of individuals and contribute to the development of society. Vocational education and digital literacy are catalysts for youth employment and help to increase their productivity and boost the manpower needs of society. The study, therefore, discusses vocational education and digital literacy as a panacea for sustainable national development. The paper explains the nexus between vocational education and digital literacy for sustainable national development. Digital literacy is fundamental to any human development and a prerequisite to any kind of learning. The paper discusses the challenges inhibiting vocational education for achieving sustainable development as multidimensional poverty, illiteracy, and inadequate vocational and technical colleges among others. As a way forward, the paper suggests a legal framework for adequate finance of the education system with government emphasis on vocational education with a great incentive to the learners to encourage the learning of technical and vocational education in schools.

Keywords: digital literacy, education, development, sustainability.

Introduction

The instinct to survive is as old as man, therefore the history of the world revolves around man and the environment. It is about acquiring skills and competence for the exploration of the environment and the survival of society. This urge has led humans not only to acquire competence that will aid in the survival of the environment but skills and capability that will help to develop a harmonious relationship between man, the state, and society. This early instinct of conquering the environment for the benefit of man led to the earliest vocation where families work towards satisfying their needs and protecting the physical environment. This led to what many referred to as the home apprenticeship system where families learn certain skills and trades. This early vocation where best described as informal because no established curriculum guided the study. Fafunwa (2004) avers that the traditional training in traditional society was largely on an apprenticeship where individuals were introduced to the craft of guardians. These crafts varied according to the area and consists of door making, leatherwork, gold smiting, and weaving among others.

Unfortunately, the early missionary schools or colonial education never hold a high premium to vocational education but were interested in training clerks and catchiest who were of an immediate need to the propagation of Christianity. Therefore, education during this period was literary and those that were regarded as educated or elite were those who read classics- Latin, Greek, Milton, and Shakespeare among others. (Akpan, Usoro, and Ibiritam 2013). The authors further stated that no formal vocational educational programme curriculum existed until 1909 when the Nassarawa School introduced leatherwork, carpentry, and weaving among others. In a similar vein, the Hope Waddell training institution that was founded in 1895 also had tailoring, carpentry, weaving, etc.

It is important to note that in 1977 the Federal Government of Nigeria issued the first National Policy on Education wherein technical and vocational education were recognized and integrated into the educational curriculum and it became a discipline taught in post-primary education. The concepts of technical and vocational skills are often interwoven and interchangeably used. (Ibekwoaba and Law-Obi, 2015). It is pertinent to define vocational education as the type of education that involves the acquisition of techniques and application of scientific knowledge for training manpower needs of society in the field of science, technology, and business. While Vocational Enterprises Institutions, VEIs are institutions established by the National Policy on Education to educate students to be “creative and transform knowledge through the technological process into wealth and a broader economic base”. The essence of VEIs is to provide students with post-basic and secondary school students that are desirous of acquiring certain skills and competence but can transfer knowledge through the technological process that will make them self-reliant, wealth creators, and providers of employment. (FRN, 2014).

Unfortunately, a cursory look at the economy of Nigeria portrays a hopeless situation with multi-dimensional poverty. For instance, the National Bureau of Statistics, NBS the highlight of the 2022 Multidimensional Poverty Index Survey revealed that 63% of the persons living in Nigeria are multi-dimensionally poor, representing 133 million Nigerians. Also, the unemployment rate has increased from 32.5% to 33% in 2022 representing a 0.5% increase from the previous year with the projected unemployment rate to trend at 40% in 2023 and 43% in 2024. In the same vein, the Global Hunger Index 2022 ranks Nigeria 103rd out of 121 countries. These statistics have bragged Nigeria as the headquarter of poverty, and also a clarion call for Nigerians and the education community to seek ways to mitigate these economic woes. This is the crux of the study and the need to rejig the educational system not only to provide the manpower needs of society but to make citizens self-sustaining. It is against this background that the study postulates that the mix of vocational education with digital literacy will provide the magic wand that rightly applied will mitigate the effect of unemployment which is the cause of poverty, low income, low savings, and eventually abysmal standard of living.

The study hinged on the human capital theory as a framework to analyze the issues raised in this paper. Though there are several proponents of human capital theory the study emphasized Becker (1962), which denotes that every worker has skills, talents, the knowledge that if well utilized will lead to the attainment of the organizational goals. Samoszuk (2021) defined human capital as the “knowledge, skills, assets and experiences that an individual has which add value to a company”. It is important to note that educating and training individuals are paramount to the achievement of organizational goals. Indisputably, people are the greatest potential asset of any organization. (Byers, 1974). Therefore, the people in any organization be it a school or profit-oriented organization must train and develop individuals to appreciate the dynamics of the organization, the market forces, and the upturn of new technology. Thus, humans become the veritable instrument for the development of any nation or organization. The human capital theory emphasizes that sufficient investment in people will lead to economic growth and development because a better-educated population will earn more, increase productivity, and investment, and be more likely to contribute to the development of the economy. This is the reason why both individuals and nations invest in education not only to provide for the manpower needs of society but the development of the nation. Thus, education is fundamental not only in acquiring vocational education but also in the digital skills that will help empower the citizens in employing sustainable national development.

In a similar vein, the National Policy of Education states that education is a veritable instrument for national development. Sustainable Development Goal the No 4 emphasizes the need to ensure inclusive and equitable quality education and promote lifelong learning opportunities. Therefore, the managers of tertiary education should encourage general education together with the use of tools. This should serve as a focal point for school administrators to instill vocational education and integrate the environmental mindset that will support sustainable developmental practices. This is the hallmark of human capital theory, where individuals could be trained in vocational education as well as rejigging their mindset on environment studies and break away from the traditional education that is inimical to the development of society. From this background the paper is structured into: the introduction, clarification of related concepts, the nexus of vocational education, digital literacy, sustainable development, the inhibitors of sustainable development, conclusion and the way forward.

Vocational Education

Education is generally acknowledged as a veritable instrument that helps individuals acquire the basic skills, competencies, and knowledge that enable that individual to navigate the world of life and contribute to the development of society. Education is paramount to the life of individuals and society. Education help the individuals acquire basic skills, helps to meet job qualification, self-employed, and better quality of life. To society, the huge sum of healthy individuals depicts a healthy nation. Thus, education becomes an essential ingredient for the development of society. It is against this background that the National Policy of Education viewed education as an instrument for national development and social change. (FRN, 2014). Therefore, the core value

of education is not only providing the manpower needed by society but also ensuring that individuals are self-employed and contribute to the development of society. This brings to the fore education that inculcates in the individuals' techniques, skills, and the application of general knowledge in providing plausible solutions to myriads of challenges confronting man and the environment.

It is pertinent to mention that vocational and technical education are seen as interwoven and used interchangeably despite the difference. Vocation education is an aspect of technical education that places a strong emphasis on skill development and practical education for societal advancement. Technical education is an aspect of education that leads to the acquisition of practical and applied skills as well as basic scientific knowledge. (Ovbiagele, 2015). The major similarity between vocational and technical education is that both are interested in training and helping learners acquire practical, applied skills and competencies that lead to the creation of a job, trade, or occupation.

Technical and vocation prepare not only individuals for the world of work but makes the individual self-sufficient and contribute to the advancement of society. (Morebise, 2022). Enehizena, Ademola, and Obun-Andy, (2016), opined that vocational education is the totality of experience the individuals are exposed to be gainfully employed. While Oharisi, (2002), cited in Joshua, (2015 p7) defined vocational education as “the total of all educational experiences systemically organized and presented by the institution to enable the learner to acquire basic productive and practical skills”.

From the above definitions, the following inferences are drawn that vocational education:

- 1). Prepares the individuals for self-support and development and it is usually organized in workshops.
- 2). Theoretical and practical concepts are combined and it involves all the domains namely the cognitive, affective, and psychomotor domains. It is also the mix of the blue-collar and the competencies that will aid the individuals to effectively navigate the world of work. Thus, vocational education consists of applied skills. competence and the general knowledge that prepare individuals not only to be self-reliance but also the general education that helps individuals to participate in the democratic process, be responsible citizens, and for the promotion of friendly environment and sustainable development.

Technical and vocational education as captured in the National Policy on Education is “a comprehensive term referring to those aspects of the educational process involving, in addition to the general, the study of technologies and related science and the acquisition of practical skills, attitudes, understanding and knowledge relation to occupations in various sectors of economic and social life (FRN, 2014 p24). It becomes imperative to emphasize that the essence of technical and vocational education is not only to provide individuals to be self-reliant, with

technical and vocational skills but also in manpower training in applied sciences, business, and technology.

Digital Literacy

With the upsurge of the internet digital literacy has permeated every facet of professions and education is not left out. It is interdisciplinary and cuts across all human endeavours. In the academic world, digital literacy is often interchanged with other concepts like technological skills, information literacy, digital competence, and 21st-century skills. So, for the study, these words are synonyms and therefore used as the same. Literacy means the ability to read and write. Though, in a contemporary world driven by information technology literacy connote more than the ability to read and write but the ability to acquire certain technical skills used in processing information and dissemination. It is cognizance of this that UNESCO, (2017) cited in Montoya, (2018), identifies literacy as the ability to learn continuously to enable individuals not only to achieve their goals but develop the knowledge that enables them to participate in community affairs and the development of society. While the European Literacy Policy Network defined literacy as not only the ability to read and write but also the ability to effectively understand and communicate using all media.

From the above definitions, literacy is not a static concept but a continuum that involves a continuous acquisition of basic computer skills that are used in both printed and online media. Digital literacy is the ability of individuals to use information technology to communicate and create text, images, video, and audio. Digital literacy is the capacity for users to access, comprehend, analyze, and use information in a variety of formats to address issues that may confront individuals or society (Milenlcora, and Lendzhova, 2021). Thus, the essence of digital literacy is the use of technology in solving mirage of problems within the digital environment. Individuals can access, use, read, analyze, and disseminate information through the use of technology.

Aviram & Eshet-Alkalai (2006 p3), state five types of digital literacy:

1. Photo-visual literacy: the ability to read and deduce information from visuals.
2. Reproduction literacy: the ability to use digital technology to create a new piece of work or combine existing pieces of work to make it your own.
3. Branching literacy: the ability to successfully navigate in the non-linear medium of digital space.
4. Information literacy: the ability to search, locate, assess, and critically evaluate information found on the web and on-shelf in libraries.
5. Socio-emotional literacy: the social and emotional aspects of being present online, whether it may be through socializing and collaborating or simply consuming content.

Sustainable National Development

Development is a common lexicon among economists and it depicts a specific change or growth in either the individual or the nation. To the individuals, it connotes a better living standard with free access to better medical facilities, education, and political freedom. Ilureme & Kpokpo (2015), opined that “development is the systematic use of scientific and technological knowledge to meet specific objectives”. While the concept of national development is a more holistic approach and it consists of all indices of individual and societal development: it includes industries, agriculture, education, social, religious, culture, sports, science, and technology. (Fadugba, 2022). Bawa, (n.d) defined national development as all-round and balanced development in all facets of individual and nation. It is imperative to note that development envisaged good or positive change. It is in recognition of this that the United Nations Decade Report defined national development as growth plus change. It further explains that the change includes the social, cultural, and economic as well as the qualitative and quantitative. Unfortunately, Nigeria is in dire need of national development and growth, but economic activities and the continuous exploration of natural resources are done at the expense of the environment. And considering the globalization of the entire world and the effect of individual states on the global economy. There is a need to protect the environment in the process of exploration of resources and this led to a call for sustainable development. Unfortunately, the concept of sustainable development is continually evolving and that makes it difficult to have a universal concise accepted definition. (Ogidi. & Ejim, 2016). One of the definitions worthy of note is Brundtland Commission (1987), it emphasizes sustainable development is the development that meets the needs of the present without undermining the future generation in accomplishing their needs. It is interested in providing the needs of the present without denying the future generation from achieving theirs by way of destroying the environment. It is the development that is environmentally friendly and strives to protect the infrastructures in the process of exploiting natural resources. Sustainable development is about creating equilibrium in economic consideration, the environment, and the improved life of the citizens in such a manner that none is detrimental to the existence of others. Nwankwo & Uzoezie (2016), asserted that sustainable development includes inter-generational equality, gender equality, just and peaceful societies, social tolerance environment preservation and restoration, poverty alleviation, and natural resources conservation. From the following definitions sustainable development cuts across the entire spectrum of society namely the quality of basic education as the driving force for sustainable development, an increase in educational standard as a precursor to an increase in productivity and a better standard of living, and a healthy and developed nation. SDGs are interweaved goals aimed at encouraging peaceful and prosperous people with an emphasis on protecting the environment now and also in the future. Sustainable development, therefore, is the “transforming our world” for the present and in the future as captured in the Sustainable Development Goals, SDGs-17 namely:

1. End poverty in all its ramifications anywhere

2. End hunger by achieving food security and improving nutrition and sustainable agriculture
3. Good health and promoting the well-being of all ages
4. Inclusive and quality education and promote lifelong learning opportunities for all
5. Gender equality and empowerment of all women and girls
6. Ensure availability and sustainable management of water and sanitation for all
7. Ensure affordable, reliable, sustainable, and modern energy for all
8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all
9. Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation
10. Reduced inequality within and among nations
11. Make cities and human settlements inclusive, safe, resilient, and sustainable
12. Ensure sustainable consumption and production patterns
13. Take urgent action to combat climate change and its impact
14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development
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
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.
17. Strengthen the means of implementation and revitalize the global partnership for sustainable development.

The Nexus Between Vocational Education, Digital Literacy, and Sustainable National Development

Vocational education is acknowledged as education that provides the recipients with the necessary training and skills for self-reliance. It is geared towards the preparation of students in jobs such as a trade or technician, it is usually called a career education. The National Policy of Education subtly provided the goals of vocational education as to provide technical and vocational skills necessary for agriculture, commercial and economic development and at the same time provide manpower needs of the society, especially in the area of applied sciences, technology, and business. (FRN, 2014). Fortunately, digital literacy is the competency that is needed to navigate the 21st economy that is information and knowledge-driven. It is the use of digital technology and the internet in providing services at the same time acquiring skills and knowledge that can enhance individual well-being. It consists of various skills and knowledge that enable individuals to be self-reliant, useful and contribute to the development of society.

The paradox of it is that the advanced economy recognizes the importance of vocational education and integrates it into their education and the benefits are enormous in the provision of

the required manpower needs and the growth of their economy. It is inarguable that technology, knowledge, creativity, and innovation are the engine that drives the development of any nation. Thus, there is a positive relationship between economic growth and investment in human capital, thus vocational and technical education if well harnessed will lead to sustainable development (Adebayo & Olubodun 2017). Again, vocational education prepares the students for real work situation with hands-on training, unlike general education which prepare students to be a seeker of jobs. In vocational education, the students are instilled with special skills by the market demand. It is a career job specification and individuals are encouraged to choose a career path that will sustain the individuals for lifelong learning. Examples of such careers are fashion design, interior decoration, and computer networking, programming among others.

Furthermore, in vocational education, the individuals are trained to create jobs and be self-employed and this help to reduce the unemployment rate in the country and the process reduces poverty and youth restiveness. Another advantage of vocational education over conventional/general education is that vocational education has a higher employment rate and creates independent individuals, and in most cases, their training is done by employer needs. Thus, it increases productivity and creates employees with better knowledge of employer demand. Likewise, the upturn of information technology and globalization has expanded the horizon of digital literacy to not only the ability to handle computers but also the ability to acquire certain basic skills like the use and production of digital media, information processing, and retrieval, participation in social networks, for creation and sharing of information among others. (Karpati, 2011).

The upturn of information technology has led to redefinitions of digital literacy to include not only skills in the use of computer and their accessories but to include skills and competence that aids the individual to explore the internet world. Such skills as analytical skills, critical skills, code skills, content creation skills, and media interactive skills. Thus, digital literacy becomes a veritable skill that empowers governmental agencies, and economic and educational settings that are needed for providing sustainable development. (Radovanovic, et al 2020). Digital literacy becomes fundamental in any human activity and a prerequisite for any kind of learning. It becomes imperative to assert that digital literacy helps improve the employability of individuals and is self-sustaining. It creates opportunities for the creation of jobs and not seekers of jobs. With the integration of digital literacy and vocational education into the school curriculum, individuals will be trained in the relevant skills and knowledge that are applied all over the world. In return, this will create employment opportunities in foreign countries and attract foreign investment and foreign exchange in the form of foreign conglomerates and foreign students. (Joshua, 2015). Again, vocational education train students in skills that are related to specific profession, trade, or occupation in addition to theoretical teaching and practical experiences that will help the students to be productive in paid employment or as self-employed.

It is imperative to emphasize that vocational education trains the learners on the use of complex technology and in the process the recipients are bestowed with digital competence like critical

thinking, and innovative and lifelong learning that will not only help in the industrialization of the economy but also for sustainable national development. The multiple effects will lead to industrialization which in effect will reduce the unemployment rate, increase income, and savings and boost the living standard of citizens which in turn accelerate development. Subsequently, it will help in no small measure to solve some of the socio-political and economic problems besieging the Nigerian economy. It is unarguably that digital literacy and vocational education are catalysts for sustainable national development. No nation can develop or compete favorably in a global market with poorly skilled manpower. It is interesting to note that the leading factors of production that enhance sustainable national development are anchored on technology, valuable hands-on skills, innovation, and creativity. And these are the recipients of a well-tutored digital competent and vocational educationist. Therefore, there is no going saying that for a nation to develop there is a need to invest in human capital as a prerequisite to sustainable national development.

Inhibitors of Vocational Education

It is imperative to state that the challenges inhibiting job creation and employment are the abysmal neglect of vocational education and the inability of educators of the educational system to integrate digital technology in all facets of the educational system. It is important to note that vocational education in Nigeria dates back to the precolonial era when traditional education was in practice and parents teach their children the family trade. (Shofoluwe, 2013). The Nigerian children were thought various skills like blacksmithing, weaving, and sculpturing among others under the direct supervision of their parents or member of the family. Unfortunately, the advent of colonial education that was championed initially by the missionary discouraged technical and vocational education and encouraged literacy education. Missionary education was characterized by literacy education and the primary purpose was winning converts, the production of clerks and interpreters that will aid the missionary in the propagation of the gospel. (Adebayo & Olubodun 2017).

This is the beginning of the dominance of colonial culture at the peril of indigenous civilization. This gave rise to the integration of literacy education into the curriculum without equal attention to vocational education. Disheartening is the myth and misconception that technical education is not for bright students or for poor parents that cannot afford literacy/general education. Thus, vocational education was seen as never doing well and the dullest who cannot achieve the best in life. The vocational education graduate is seen as a technician and treated as such, and those who do not have the administrative acumen that can sustain the highest administrative cadre. This is attested to the way graduates of technical and vocational education are treated in public service, they are never at par with their contemporaries. Allen (2020), opined that parents and community leaders have the mindset that vocational and technical education is the second choice to academic education. This wrong notion had discouraged parents from encouraging their children to acquire vocational skills and this is the bane of vocational education in Nigeria. Consequently, the government had not given the technical and vocational education their desired position in the

scheme of things, and worse is the disparity between a university graduate and a polytechnic graduate in public services.

Again, the paucity of funds for the educational system is another challenge militating against vocational education in the attainment of sustainable national development. The percentage of budgetary allocation to education is abysmally low compared to international best practices. Taiwo (2022) in the analysis of the budgetary allocation from 2016-2022 opined that the educational sector has not been adequately funded and it is yet to meet the United Nations Education Scientific and Cultural Organization (UNESCO) recommendation for developing countries. Consequently, the education sector lacks the basic infrastructures that will drive a functional vocational education that will enhance sustainable national development. The effect is that most technical departments in Nigerian universities lack functional laboratories or workshops with modern equipment and facilities that will aid effective training. (Uwaifo 2010).

Furthermore, the curriculum used in Nigeria's vocational education is not in tune with contemporary best practices. There is a need to restructure vocational education to meet the market demand in the digital world that is information and knowledge-driven. This is important to ensure that there is no mismatch between what is produced in the school and what society needs. Other challenges as defined by Aniah, and Abubakar (2021) are a lack of qualified and competent teachers, poor learning outcomes due to poor environment, low esteem, and recommendation for skilled manpower, and inadequate vocational and technical colleges among others.

Conclusion

Vocational education is a career education that is geared towards equipping students with the basic skills and trade or occupation that will not only make them employable, and productive but help them to be self-sustaining. Vocational education and digital literacy not only promote self-employment but help to mitigate socio-political, and economic problems. Like youth restiveness, unemployment, and all other social vices that are inimical to the development of society. This support the human capital development that every individual has skills and capability that if invested in will lead to economic growth and development. Thus, investment in human capital development is a prerequisite for sustainable development. So, technical and vocational education skills are relevant for the industrialization of any economy, they attract foreign investment and, in the process, foreign exchange. The paper suggests that for Nigeria's economy to be at the bar with its contemporaries, increase productivity, and solve the multidimensional poverty and gargantuan unemployment rate, the government needs to rejig the curriculum to meet the global market demand by providing adequate financial resources to drive vocational education.

The Way Forward

The prospect of achieving sustainable national development is premeditated by vocational education and digital literacy. Therefore, to achieve Sustainable National Development there is the need to rejig the educational curriculum to be in tune with the global market demands. The national currency trending in the global market is the use of information technology, therefore

the curriculum should be designed in such a way as to integrate information technology as the policy and programme of vocational education. Also, there is the need to invest heavily in vocational education and at the same time correct the wrong perception of vocational education as education for the less privileged in society and for those who cannot compete in general education. Consequently, the government through a policy should introduce incentives for vocational education like scholarships, bursaries, and non-payment of school fees, and end the discrimination between the graduate of technical and vocational education and university graduates in public services recruitment and payment.

There is a need for restructuring vocational education and a synergy between the local, state and federal governments, and industrial sectors in the training and retraining of citizens in various careers in digital information and literacy. There is no gain in saying that the youth unemployment rate can be curtailed with the massive acquisition of vocational skills, digital literacy, and competency in information technology. Government should build more vocational institutions in every local government with 70% of practical training. Also, the government should revitalize the earn -and learn programs in technical and vocational education, this will encourage youths to acquire skills that will not only boost their employability but live productive life that will contribute to the development of society.

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