

**MOBILIZATION OF RURAL POPULATIONS IN NIGERIA FOR POVERTY
ERADICATION/ALLEVIATION UNDER THE UNITED NATIONS EDUCATION 2030
AGENDA: ROLE OF ENVIRONMENTAL LITERACY EDUCATION**

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ABSTRACT: *Nigeria's extreme poverty rate, which has been soaring over time, reached its peak by June, 2018 when the country topped the list of 10 most extremely poor countries globally and in Africa and was consequently declared the 'poverty capital of the world'. Available statistics indicate that rural populations in Nigeria have all along borne the brunt of the country's poverty endemic. In September 2015, the United Nations (UN) adopted seventeen (17) Sustainable Development Goals (SDGs) designed to eliminate barriers to global sustainable development by 2030, focusing, especially, on African and other countries facing special developmental challenges. The first of these Goals, SDG 1, is to end poverty in all its forms everywhere. Having made Education a key instrument for achievement of the SDGs, UNESCO, an agency of UN, developed a specific Education Curriculum Framework for SDG 1 which has suggested desirable environmental sustainability learning objectives, content and delivery processes. Successive Federal Governments of Nigeria adopted various strategies to mobilize the citizenry for poverty eradication/alleviation with no significant success. Notably, the strategies have been devoid of environmental education for the production of environmentally literate citizenry which many authorities, including UNESCO, have considered germane to effective environmental resources management and utilization necessary for socio-economic development and poverty eradication/alleviation. This paper was designed to crystallize the role of Environmental Literacy Education (ELE) in the mobilization of Nigeria's rural populations for poverty eradication/alleviation within UNESCO's Education 2030 Curriculum Framework for SDG 1.*

KEYWORDS: poverty eradication/alleviation, rural populations in Nigeria, mobilization strategies, sustainable development goals, education 2030 agenda, environmental literacy education.

INTRODUCTION

United Nations Agenda 2030 for Eradication of Poverty Globally: Education as a Pivot

When it became obvious that certain inadequacies constituted an impediment against successful tackling of many global challenges to human survival by the end of the target period (2000-2015) of the erstwhile Millennium Development Goals (MDGs), the United Nations (UN) General

Assembly, at its 25th September, 2015 meeting, adopted a new Universal Agenda for global sustainable development by 2030. The agenda was encapsulated in seventeen (17) Sustainable Development Goals (SDGs) designed to address key systemic barriers to sustainable development, especially in African and other countries facing special developmental challenges. The first of these Goals (Goal 1) is to “End poverty in all its forms everywhere” (UNESCO, 2017a, p.6). In the pursuit of this and the other sixteen SDGs, education has been made a key instrument. The then Director General of UNESCO, Irina Bokova, explained the adoption of education as instrument *par excellence* for achievement of the SDGs in the following words (UNESCO, 2017a, p.7):

A fundamental change is needed in the way we think about education’s role in global development, because it has a catalytic impact on the well-being of individuals and the future of our planet.... Now, more than ever, education has a responsibility to be in gear with 21st century challenges and aspirations and foster the right types of values and skills that will lead to sustainable and inclusive growth, and peaceful living together.

In the specific case of poverty eradication (SDG 1), the United Nations Educational, Scientific and Cultural Organization (UNESCO) which champions UN’s emphasis on Education for Sustainable Development (ESD), posits that education and poverty are inversely related; populations with high education levels tend to have a lower number of people in poverty as education imparts knowledge and skills that garner higher wages. Conversely, poverty poses a barrier to education (UNESCO, 2016). The UN organization has further specified the ‘direct’ and ‘indirect’ effects of education on poverty as follows (UNESCO, 2017b, p. 13):

The direct effects of education on poverty reduction is through increased earnings or income. The indirect effect of education on poverty is that education improves income and thus makes the fulfillment of basic necessities easier and raises living standards, reducing human poverty. Education indirectly helps in the fulfilment of basic needs such as water and sanitation, utilization of health facilities and shelter.

UNESCO (2016) also harped on the importance of developing *human capital* for the effective utilization of *physical and natural capital* to tackle poverty. In simple terms, human capital, according to Grant (2004), refers to the knowledge, skills, competencies and other attributes that are relevant to economic activity. While physical capital refers to tangible man-made goods (machinery, buildings, supplies, vehicles, computers and so on) which assist in the process of creating a product or service, natural capital on the other hand, refers to the stock of natural resources (soils, minerals, the ecosystem, water, air and so on) which provide people with free

goods and services. UNESCO therefore sees human capital development through education and training as key to the effective harnessing of physical and natural capital for poverty eradication/alleviation.

All in all, UNESCO endorses the views of Vladimirova & Le Blanc (2015) that expanded education opportunities which promote equality and equitable access to quality education and reach the most disadvantaged groups, will break intergenerational transmission of poverty. This stance is reflected in UNESCO's *Curriculum Framework for Sustainable Development Goal 1* (UNESCO, 2017b, pp. 15-16). Given the structure, content, methodology and focus of the curriculum which will be subsequently highlighted here, the purpose of this paper is to articulate the role of Environmental Literacy Education in the realization of UNESCO's Education 2030 Agenda for poverty eradication/alleviation with particular reference to the rural populations of Nigeria.

GLOBAL PROFILE OF POVERTY

Definition and Classification of Poverty

The UN Universal Declaration of Human Rights, Article 25 (UN, 1948) declares as follows (UNESCO 2017b, p.13):

Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and the necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.

Inspired by this Declaration, the United Nations Development Programme (UNDP) in its Human Development Report (UNDP, 1997), refers to poverty as the denial of opportunities and choices most basic to human development, including opportunities and choices to lead a long, healthy creative life and to enjoy a decent standard of living, freedom, dignity, self-esteem and the respect of others. In effect, poverty could be seen as being multidimensional. It could be seen as the lack of household income (consumption), the inability to meet basic needs, including food, shelter, clothing, education, healthcare and so on; even, in general terms living below the international poverty line (World Bank, 2008).

In concrete terms, however, poverty has been classified into two categories – *relative* and *extreme*. According to UNESCO (2017b), relative poverty occurs when poor people in a rich country live above the global extreme poverty threshold but still fall well below what that country will define as a reasonable standard of living. Extreme poverty, on the other hand, is largely associated with the fate of people in many less economically developed countries. This extreme poverty syndrome is a major concern to UNESCO's SDG 1.

In 1990, the World Bank set the extreme poverty rate as living at or below US\$1.00 per day. This threshold has since been updated to US\$1.90 per person per day to reflect the minimum consumption and income level needed to meet a person's basic needs (Ferreira et al., 2015). UNESCO (2017b) has reported that in 2015 about 800 million (nearly 11%) of the world's population of 7.3 billion (UN 2015) fell within the extreme poverty line.

A number of extreme poverty indicators have been identified by the UN. Table 1 below shows a selection of the indicators and world Regions that fall under them.

Table 1: Selected Extreme Poverty Indicators and Positions of Top Five Global Regions Affected.

Regions	Extreme poverty indicators and number and % of the world total poor under each indicator accounted for by each Region			
	Extreme Income Poverty line of \$1.25: World Bank 2008 (Millions)	Hunger (millions)	Children out of school, 2008 (millions)	Adult Illiteracy, 2005- 8 (millions)
Sub-Saharan Africa	376 (30.5)	234 (27.5)	28.9 (45.3)	167.2 (21.4)
South Asia	546.5 (44.4)	304 (35.8)	16.9 (26.5)	412.4 (52.8)
East Asia	265.4 (21.5)	232 (27.3)	7.9 (12.4)	105.3 (13.5)
Latin America	35.3 (2.9)	49 (5.8)	2.9 (4.5)	36.1 (4.6)
Middle East and North Africa	8.5 (0.7)	31 (3.6)	7.2 (11.3)	60.2 (7.7)
World	1231.7 (100)	850 (100)	63.8 (100)	781.2 (100)

Adapted from: UNSDSN (2012). *Global Profile of Extreme Poverty*, Table 2.

As table 1 above shows, under the extreme income poverty line of \$1.25 (World Bank, 2008), Sub-Saharan Africa, South Asia, East Asia, Latin America, Middle East and North Africa respectively accounted for 30.5%, 44.4%, 21.5%, 2.9% and 0.7% of the World's poor by 2008. Precisely, Sub-Saharan Africa had the highest share (45.3%) of world's children out of school. The Sub-Saharan region also was second (behind South Asia) in percentage contribution to the global extreme poverty indicators of extreme income poverty, hunger, and adult illiteracy.

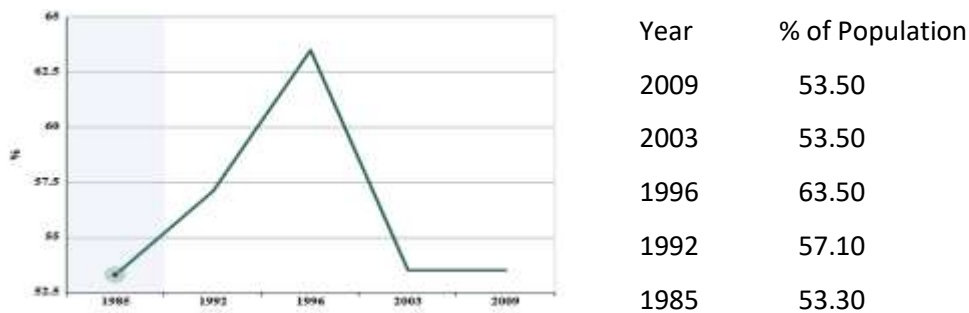
Nigeria belongs to the Sub-Saharan Region of Africa. The specific extreme poverty situation in Nigeria and among her rural populations (which is the focus of this paper) is presented immediately below.

NIGERIA'S EXTREME POVERTY PROFILE

The Overall Situation

Nigeria's extreme poverty situation has for decades been worse than the global situation described above. As figure 1 below shows, between 1985 and 2009, Nigeria had more than half of her population living on less than \$1.90 per day.

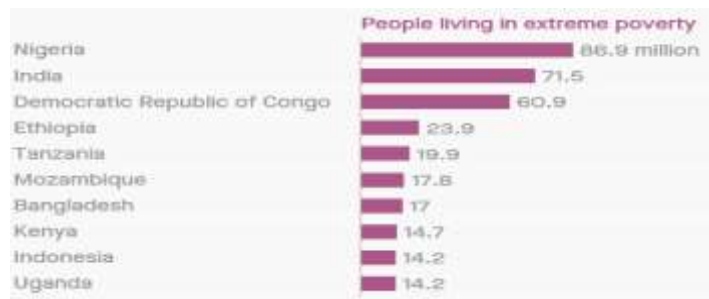
Fig. 1: Percentage of Nigeria's Population in Extreme Poverty (living on less than \$1.90 per day): 1985-2009.



Adapted from: World Bank (2011).

More recently too, Quartz Africa (2018a), using the World Bank extreme poverty index of less than \$1.90 (₦684) a day, reported that by June 2018, 86.9million (48.3%) of Nigeria's estimated 180million population were living in extreme poverty. This placed Nigeria as the country that has the highest extreme poverty population among top 10 countries of the world with extreme poverty. Nigeria was thus declared the "poverty capital of the world". Fig. 2 below illustrates the situation

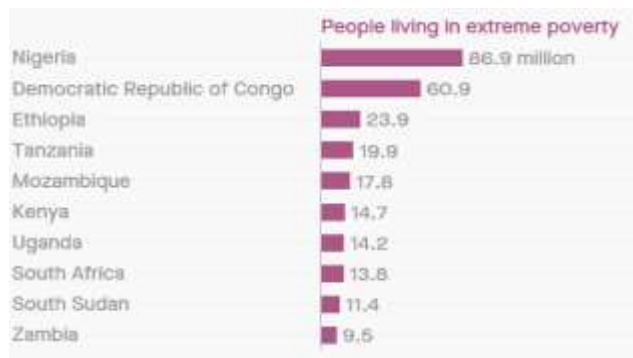
Fig 2: Top Ten Countries of the World with Extreme Poverty (June, 2018)



Data source: Quartz Africa (2018a).

With reference to the African Continent, Nigeria also had the highest extreme poverty population (86.9million) among top 10 African countries with extreme poverty by June 2018. Fig 3 below presents in a histogram the poverty positions of the ten African countries.

Fig 3: Top Ten African Countries with Extreme Poverty (June, 2018)



Data source: Quartz Africa (2018a)

Nigeria's extreme poverty profile appears to be rather precariously rising by the clock. As reported by Pulse Nigeria (2018), within a six month period (June to December 2018), the population of Nigerians living in extreme poverty increased by 3.9million. Accordingly, an estimated 90.8million Nigerians were living in extreme poverty as 2018 wound down to a close. This number constituted about 46.4% of Nigeria's estimated total population of 195.6 million at the time.

Extreme Poverty Profile of Rural Nigeria

The concept, *rural* is usually subjected to a variety of definitions because of the varied and non-universal indices used to delineate a rural entity, such as a community. For instance, while the Nigerian Federal Office of Statistics (currently known as National Bureau of Statistics) defines rural areas in Nigeria as communities with less than 20,000 people, the United States of America Census Bureau (1995) considers a community not above 2,500 inhabitants as rural. Whatever parameter is adopted to define a rural area, a basic attribute of rural entities in Nigeria is that, as has long been established also for other developing countries (UNESCO, 1980), the greatest percentage of Nigeria's population are found in the rural areas. For instance, the World Bank (2016) has shown that the population statistics of Nigeria's rural communities were 53% and 52% of the country's total population in 2014 and 2015 respectively.

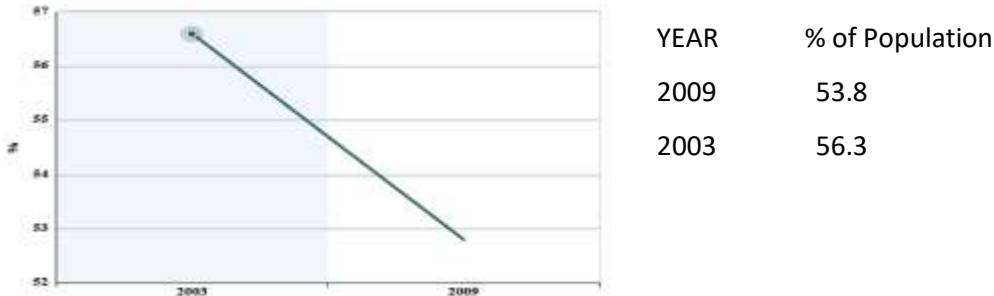
Unfortunately, this teeming rural population is characterized by a host of social and economic problems, including high levels of illiteracy and low economic returns from occupational endeavours essentially caused by low productivity and inadequate road networks and transportation systems for exchange of goods and services. In 2010 for instance, 50.5% of adults in rural Nigeria were illiterates in any language (NMEC, 2010). There are also the problems of inadequate health provisions, improper sources of potable water as well as near absence of reliable source of power and illumination (Eheazu, 2017). Olisa and Obiukwu (1992, p.65) summarize this sombre situation in the following words:

The main features of rural areas are depression, degradation and deprivation. Many rural villages are immersed in poverty so palpable that the people are the embodiment of it. In most rural areas in Nigeria, basic infrastructure where they exist at all, are too inadequate for meaningful development.

Subsistence agriculture (including farming, fishing and herdskeeping) is usually seen as the mainstay of the economy of rural populations, in developing countries like Nigeria (National Geographic Society, 2016). However, due to the low economic returns to agriculture experienced by the rural communities with the negative welfare implications as described above, the rural community members engage in diversification of their livelihood assets. They involve themselves in off-farm and non-farm activities like weaving, carving, sculpturing, tannery, blacksmithery, metal works, masonry, and so on. In spite of these efforts to survive economically, extreme poverty still remains endemic among the rural populations.

In 2003/2004, the number of extreme poor people in rural Nigeria as recorded by Nigeria's National Bureau of Statistics (NBS) was 51.5 million which constituted about 56.3% of the then total rural population of 91, 474, 245 (NBS, 2010). Again, in a study of Spatial Dimension of Poverty in rural Nigeria, Obayelu & Awoyemi (2010) investigated poverty profile across geopolitical areas in rural Nigeria, using the 2003/2004 Nigeria Living Standard Survey (NLSS) data. The investigation revealed that majority of the poor lived in the rural areas. For instance, poverty decomposition in the Federal Capital Territory (FCT), showed that 84% of the poor lived in the rural area. Furthermore, the International Fund for Agricultural Development (IFAD) has recorded (IFAD, 2016) that the number of rural poor in Nigeria by 2014 was 50,010,839 out of a total rural population of 94,165,210. In other words, 53.1% of the rural population in Nigeria were identified as poor.

Fig 4 below is a graphic representation of the profile of extreme poverty in rural Nigeria based on the few available data.

Fig. 4: Percentage of Nigeria's Rural Population in Extreme Poverty: 2003 and 2009.

Adapted from: World Bank (2011).

Although the profile shows slight reduction in the data from 56.3% in 2003 to 52.8% in 2009, nevertheless, the data still show that more than half (>50%) of the rural population in the years indicated were extremely poor. This was also the case in 2014 when, as indicated above, 53.1% of the rural population were in extreme poverty (IFAD, 2016).

From practical experience, the extreme poverty endemic among rural populations in Nigeria does not appear to be abating currently (2019), in spite of previous and ongoing efforts at rural transformation/socio-economic development. An examination of the potencies of the said efforts is obviously pertinent at this point to identify and suggest remedies to any pitfall(s) in the attributes of the strategies that made them ineffective.

Mobilization Strategies for Extreme Poverty Alleviation in Nigeria: The Missing Link

Since Nigeria's Independence in 1960, successful governments of the country (Federal, State and Local) have attempted, in varying degrees to adopt one form of rural socio-economic transformation for poverty alleviation or another (Kumar, 1979). With the creation of States in the 1970s and thereafter, rural socio-economic development in Nigeria proceeded through a greater variety of government programmes mounted in response to the preferences and particular circumstances of individual states. Generally, however, the emphasis on agricultural extension and community development training projects has been in the centre of these programmes. University departments in the country which ran courses in agriculture and health initiated various schemes to guide the rural education and development programmes. Majority of such university schemes concentrated on the training of youths in improved agricultural methods and the encouragement of farm settlements. Progressively, the schemes incorporated training programmes for the production of community development workers who, after their orientation period, were posted to villages to assist rural inhabitants in the area of basic literacy and various agricultural and health improvement programmes. Such trained extension personnel also served as links between the rural dwellers and the ministries involved in the rural development projects (Eheazu, 2017).

Between 1985 and 1993, the Federal Military Government, headed by General Ibrahim Babangida, came up with a more comprehensive programme for the improvement of life and living conditions

of the rural populace. Apart from introducing health and capital formation programmes (such as the Expanded Programme on Immunization and rural agricultural loan programmes), the Federal Government created (and also directed States to create) a Directorate for Food, Roads and Rural Infrastructure. Each Directorate was charged with the responsibility to construct, according to needs, dams and water boreholes, and to provide rural electricity under terms that sometimes required the rural communities to provide a certain percentage of the cost of a given project (counterpart fund). There were also schemes for rural housing and small-scale industries. The objective of those rural development programmes, apparently, was to improve the general socio-economic conditions and reduce the level of poverty in the rural areas.

In more recent times, socio-economic development strategies in Nigeria have included Expanded Rural Electrification Schemes to encourage establishment of cottage industries, as well as Credit Schemes to Small and Medium Enterprises (SMEs) for improved productivity in farming and other rural occupations. There has also been put in place a National Economic Empowerment and Development Strategy (NEEDS) initiated by the Nigerian Federal Government in 2003 with the aim to eradicate poverty and bring about sustainable development through agencies such as the National Poverty Eradication Programme (NAPEP) established two years earlier (2001). The latest (2018/2019) poverty intervention strategies adopted by the Federal Government are basically two-fold; namely (Quartz Africa, 2018b);

- i. Collateral-free ₦10,000.00 (\$28) repayable and renewable loan scheme for about 2 million petty traders. The sustenance of this scheme is not seen as tenable because of possible low return rates as has been the case with similar loans in the past. For instance, it has been reported that a \$126 million loan scheme for farmers launched in 2015 “had less than 50% recovery rate by December 2017” (Quartz Africa, 2018b, p.6).
- ii. Distribution of \$300 million dollars recovered from looted fund in Swiss Banks to Nigeria’s poorest people. The efficiency of this strategy for eradicating/alleviating poverty in the country is doubtful. For one thing, Nigeria, as has been rightly pointed out by Quartz Africa (2018b), lacks the records from which she would properly identify her citizens in extreme poverty. Again, given the fact that most of the extremely poor have not bank accounts, it is unlikely that the exercise will be transparent, corruption-free and effective in achieving its purpose of extreme poverty eradication/alleviation in Nigeria.

Additional to the identified inefficiencies bedeviling the effectiveness of the mobilization programmes/strategies discussed above is the absence of an education programme to enable the beneficiaries to understand and effectively utilize the opportunities offered them to exit the poverty trap. For instance, there should have been some training in loans utilization. Besides, the basic literacy programme introduced for subsistence farmers was not *functional*, but part of the then ABE (Adult Basic Education) programme. Even in agriculture, concentration of government was only on making available inputs (hybrid seedlings, tractors and so on) without proper training programmes for the farmers on sustainable agriculture through the protection of the ecosystem and general environmental preservation. The author of this paper considers the absence of environmental sustainability education and training as a missing link in the strategies adopted so

far. It would therefore be useful at this point to examine the importance of such education for poverty eradication/alleviation.

The Place of Environmental Sustainability Education in Poverty Eradication/Alleviation

Nigeria's mobilization strategies for eradication/alleviation of extreme poverty over the years, have hardly made any perceptible dent on the fabric of the poverty syndrome. Notably, use of appropriate education as a mobilization strategy to create individual and group awareness of, commitment to and determination about sustainable utilization of available physical and natural capital (resources) to tackle the poverty challenge (UNESCO 2017b) appears to be part of the problem. Such 'appropriate' education should be one that relates to the environment which provides the poor masses with the natural resource/capital base to carry out their economic activities.

The utilization of the earth's space and resources at the home, community or national levels creates complex organic and inorganic interactions which influence people's economic, social, political and aesthetic decisions and thus necessitates development of an environmental ethic which will motivate adoption of a life style supportive of a healthy environment (Rugumayo, 1983). Development of such ethic would be through Environmental Education, the overall goal of which is, according to the UNESCO-UNEP Belgrade Charter, development of a world population that is aware of and concerned about the environment and its associated problems (UNESCO-UNEP, 1976). The primary responsibility of environmental educators, according to the Belgrade Charter, is the development of an environmentally literate society capable of internalizing environmental issues and making decisions based on real perspectives. Herein lies the essence of Environmental Literacy Education (ELE) to support UNESCO's Education 2030 Programme as a strategy for poverty eradication/alleviation especially among rural populations in Nigeria.

The importance of Environmental Literacy (EL) in poverty eradication/alleviation has been highlighted by many environmental educators and specialists. For instance, Ibikunle-Johnson (1986) has traced the challenge of widespread and virtually endemic backwardness and poverty among African Nations to the mismanagement of the continent's environment and its resources due to widespread environmental illiteracy/ignorance among African leaders. More recently too, Eheazu (2019, p. 163) has x-rayed the case of Nigeria and found out that "environmental illiteracy is rife in every segment of Nigeria's population (creating) a situation which invariably contributes to the overall backwardness, poverty and underdevelopment in the country". Stressing on the importance of EL in the effective management of the environment and its natural resources for socio-economic development and poverty eradication/alleviation, Ibikunle-Johnson (1986, p. 38) clearly explains:

Effective resource management cannot be achieved unless all citizens (young and old alike) are educated to be aware of their individual roles in the process. A citizen who lacks environmental education is thus unlikely to play an effective

role; equally, if his environmental knowledge and attitude lack cohesiveness, or if his “environmental literacy” is unrelated to his particular function (farmer, fisherman, nomad, engineer, architect, etc.) his best plans become unrealizable. Environmental literacy for all should enable members of the communities, individually and collectively, to undertake the identification of environmental problems and issues; collection of environmental information and its dissemination; development of alternative solutions to environmental problems. Environmental education programmes for the development of this kind of functional literacy should include education/training action plans for youths and adults at different pedagogical levels. This kind of environmental plan is, in essence, “education for development”.

These references evidently underscore the germaneness of the topic of this paper and its focus on the role of environmental literacy education (ELE) in poverty eradication/alleviation among rural populations in Nigeria. More on ELE subsequently in this paper after examining the related contents of UNESCO’s 2030 Education Agenda for SDG 1.

UNESCO’S EDUCATION PROGRAMME FOR GLOBAL POVERTY ERADICATION (SDG 1)

UNESCO’s Environment-Related Curriculum

Based on:

- i. UNESCO’s expressed conviction highlighted above in this paper about the inverse relationship between education and poverty and the need to develop human capital through education to ensure proper utilization of physical and natural capital for poverty eradication; and
- ii. The reinforcement by the Conference of Commonwealth Education Ministers in June, 2015, of the centrality of education for building resilience and preparing the next generation of Commonwealth citizens to contribute positively to the social, environmental and economic development of their communities (by) driving the SDGs (UNESCO, 2017b, p. iii), UNESCO has developed an Education Curriculum Framework for the SDGs.

The specific curriculum framework for global poverty eradication (SDG 1) has been drawn “with clear implications for children’s enrolment and dropout rates as well as educational attainment (and) expanded opportunities that ensure equality and equitable access to quality education and learning that will reach the most disadvantaged groups and break the intergenerational transmission of poverty” (UNESCO, 2017b, p. 14). Table 2 below shows part of the details of the

UNESCO Curriculum Framework for SDG 1 which is environment-related and which the author of this paper has considered relevant in articulating the role of Environmental Literacy Education in the achievement of SDG 1 in partnership with UNESCO.

Table 2: UNESCO's Environment-Related Learning Activities, Suggested Topics and Delivery Approaches/Methods for Achievement of SDG 1

S/No	Learning Objectives	Suggested Topics	Delivery Approaches /Methods
1.	<u>Cognitive</u> The learner knows about causes and impacts of poverty such as disasters caused by natural hazards and other climate change-induced impacts, anthropogenic environmental degradation and technological disasters.	The interrelation of poverty, natural hazards, climate change and other human-induced economic, social and environmental shocks and stresses.	Plan and implement local service-learning and/or engagement opportunities for empowering poor people, reducing their vulnerability to different hazards and increasing resilience – in collaboration with NGOs, the private sector and/or community groups, etc.
2.	<u>Behaviourial</u> The learner is able to propose solutions to address systemic problems related to poverty.	Resilience of the poor and those in vulnerable situations	- do -
3.	<u>Socio-emotional</u> The learner is able to show sensitivity to the issues of poverty as well as empathy and solidarity with poor people and those in vulnerable situations.	Consequences of poverty such as malnutrition, child and maternal mortality, crime and violence.	Plan and run an awareness campaign about poverty locally and globally.

Source: UNESCO, 2017b, pp. 15 - 16

The learning objectives, suggested topics and delivery methods in table 2 above along with others proposed by UNESCO “to end poverty in all its forms everywhere” are listed in tables 1.2.1, 1.2.1a and 1.2.1b (UNESCO, 2017a, pp. 12-13). To facilitate reflection of these proposals at all levels and types of education (Early Childhood, Primary, Secondary, Technical/Vocational Education and Training, Tertiary and Adult Education) and all forms of education - Formal, Non-Formal and Informal, UNESCO (2017b, pp. 15-16), further provides in a “Curriculum Framework for SDG 1”, the knowledges and understandings, skills and applications as well as values and attitudes to be inculcated in each level or form of education and the appropriate methodologies. The Curriculum Framework is thus imbued with a high degree of flexibility as it is designed to serve as a guide for countries to conceptualize, review or further develop their national curricula and

ensure that education is an integral part of any strategy to create a resilient generation that will advocate for action and the attainment of the relevant SDG.

ENVIRONMENTAL LITERACY EDUCATION (ELE) PROGRAMMES TO SUPPORT UNESCO'S EDUCATION 2030 AGENDA FOR SDG 1

For one to understand the aims, structure and processes of Environmental Literacy Education (ELE), one would first need to be familiar with the concept and content of **Environmental Literacy** (EL) which is fundamental to the provision of Environmental Literacy Education (ELE). Although some basic reference has been made in the introductory section of this paper to the attributes inculcated by EL in its beneficiaries, nonetheless, there is need to further clarify the concept and its content in order to facilitate more indepth understanding of the ensuing discourse on the topic of this paper as follows immediately.

Environmental Literacy (EL): Its Focus and Content

As has been explained elsewhere (Eheazu, 2013), the term *Environmental Literacy* has come to be seen as one of the literacies which have emerged as a result of the felt need to apply and internalize the streams of developments in human knowledge, science, technology and human experiences over time, which have necessitated expansion of the meaning of the term, literacy, beyond its original recognition as the ability to read and write and enumerate in any language. In summary, environmental literacy is generally seen as focusing on the creation of awareness of and concern about the environment and its associated problems, as well as the knowledge, skills and motivations to work towards solution of current problems and the prevention of new ones (NAAEE, 1999).

Roth (1992, p.16) briefly described the content of Environmental Literacy (EL) as consisting of:

... a set of understandings, skills, attitudes and habits of mind that empowers individuals to relate to their environment in a positive fashion and to take day-to-day and long term actions to maintain or restore sustainable relationships with other people and the biosphere ... The essence of EL is the way we respond to the questions we learn to ask about our world and our relationship with it; the ways we seek and find answers to those questions; and the ways we use the answers we have found.

Roth further organized the content of EL in three levels as follows:

- i) Environmental Literacy Level One (ELL₁), referred to as '*Nominal Level*', which indicates ability to recognize many of the basic terms used in communicating about the environment and to provide rough, unsophisticated, working definition of their meanings.

- ii) Environmental Literacy Level Two (ELL₂), called the '*functional level*', which shows a broader knowledge and understanding of the nature and interactions between human social systems and other natural systems; and
- iii) Environmental Literacy Level Three (ELL₃), the '*Operational Level*', depicting progress beyond functional literacy in both the breadth and depth of understandings and skills. Persons at the operational level routinely evaluate the impacts and consequences of actions, gathering and synthesizing pertinent information, choosing among alternatives, advocating action positions and taking actions that work to sustain or enhance a healthy environment.

Environmental Literacy Education (ELE): Definition and Learning Outcomes

Environmental Literacy Education (ELE) could be defined as the process of disseminating the above contents of EL in order to develop in beneficiaries, as outcomes, environmental responsible behaviour expected of environmentally literate persons which, according to Hungerford et al. (1994) include:

- i. Confidence in their ability, both individually and collectively, to influence decisions on environmental problems and issues; such as waste management and pollution control.
- ii. Assumption of responsibility for personal actions that would positively influence or avert environmental disasters.
- iii. Personal and/or group involvement in environmentally responsible behaviours such as afforestation and reforestation to minimize the environmental effects of deforestation.
- iv. Persuasion – e.g. using informal discussion to encourage one another to support a positive environmental position such as involvement in processes of environmental protection and preservation.

As indicated earlier in this paper with reference to Belgrade Charter (UNESCO-UNEP, 1976), the primary role of Environmental Education (EE) is development of an environmentally literate society capable of internalizing environmental issues and making decisions based on real perspectives. Accordingly, the learning outcomes of Environmental Education are invariably reflective of those of Environmental Literacy Education (ELE). By that fact, Iozzi, Levault & Marcinkowski (1990) proposed in some considerable detail that learning outcomes of EE, and by implication of ELE, should be assessed according to Taxonomies of Educational Objectives and other characteristics which are summarized immediately below.

i. Cognitive Domain stressing:

- a. **Knowledge** of ecology, environmental problems and issues, and appropriate environmental action strategies;
- b. **Skills** for dealing with action strategies, including identification, investigation and analysis of issues; and skills for selecting appropriate environmental action plans and evaluating their outcomes.

ii. Affective Domain, covering:

- a. **Environmental Sensitivity or Appreciation** resulting in an individual viewing the environment from an empathetic perspective;
- b. **Attitudes** towards pollution, conservation, technology and so on, as well as the related environmental action showing concern for nature and extent of human impact on it;
- c. **Values** relating to, among other things, selection of means and ends; environmental health ,and
- d. **Ethics/Morality Reasoning** involving a personal view on creating a balance between quality of life and quality of environment.

iii. Responsible Environmental Behaviour

This domain spells out active participation aimed at solving problems and resolving issues; environmentally sound consumer purchasing, methods for conserving resources, assisting with the enforcement of environmental regulations, using personal and interpersonal means to encourage environmentally sound practices, policies and legislative initiatives.

iv. Assumption of Personal Responsibility. This involves:

- a) **Recognition** that one's negative behaviour has a negative effect on the environment and, likewise, one's positive behaviour can have potentially positive effect on the environment;
- b) **Acceptance of Personal Responsibility** for negative environmental effects or impacts, and for one's own role in helping to resolve environmental impacts and issues;
- c) **Willingness to help correct negative environmental impacts and a concomitant willingness to help resolve general environmental issues.**

The Structure of Environmental Literacy Education (ELE)

From the content and expected outcomes highlighted above, it would be appreciated that ELE has a multi-focal structure which begins with basic environmental knowledge inculcation and acquisition. This basic knowledge component is based on the idea that before an individual can act on an environmental problem, that individual must first understand the problem (Pooley & O'Connor, 2000). The next step is training of the individual towards the application of his/her acquired knowledge to investigate and evaluate environmental issues and apply appropriate solutions. Finally, the individual must be equipped to be able to choose which course of action is best in a given situation. The said multi-focal process is applicable, if appropriately designed, at every level of education, including basic formal and non-formal as well as higher education. This presupposes that ELE, like the UNESCO Education 2030 Agenda for SDG 1, could take place through every form of education (formal, non-formal and informal) as well as through various types of the education enterprise (pre-school, vocational, primary, secondary, tertiary, adult and so on). In disseminating ELE in conjunction with UNESCO's Education Programme however, considerable attention must be paid to stressing the importance of viewing the environment within

the context of human influences and environmental literacy as a vital mobilization strategy for poverty eradication/alleviation.

Environmental Literacy Education (ELE) Programmes for Achieving SDG 1 in Rural Nigeria in Conjunction with UNESCO's Related Education Agenda

The above analyzed content, process and expected outcomes of ELE and the demographics of Nigeria's rural populations, including, especially, their generally high illiteracy level, obviously manifest that employment of ELE as a strategy for mobilizing for alleviation of extreme poverty in rural Nigeria would involve three major target groups as follows:

- a) Rural pupils and students in formal education institutions;
- b) The less educated and illiterate rural adult populations of farmers, herdskeepers, artisans and so on;
- c) The more educated rural community members and leaders.

Accordingly, ELE would have to adopt Formal, Non-Formal and Informal modes of delivery, like the UNESCO education programme for SDG 1, to achieve UNESCO's learning objectives for extreme poverty eradication/alleviation in rural Nigeria. Details of the process are succinctly presented immediately below;

i. The Formal Mode

This would involve appropriate inclusion in the syllabuses of basic literacy, primary, secondary and tertiary education institutions within the rural areas, of what Roth (1992) referred to as the *nominal, functional* and *operational* contents of EL (already highlighted in this paper). The formal mode will ensure that rural children in primary schools as well as adolescents and adults at the secondary, basic literacy and tertiary levels of education are afforded the opportunity to acquire necessary knowledge to understand the natural and anthropogenic causes of low productivity, low income and extreme poverty as well as the skills to address these causes and their impacts, both as individuals and as groups, in accordance with the cognitive, behavioural and socio-emotional learning objectives and topics for SDG 1 suggested by UNESCO as exemplified in table 2 of this paper.

ii. The Non-Formal Mode

This mode of ELE is an alternative to the school or institutionally based formal mode. Accordingly, it is not systematized or hierarchically arranged like in a school curriculum, but would address individual, group and community needs for awareness of issues and challenges of extreme poverty and the responsibility of all citizens to tackle them. The programme would be implemented virtually *in situ* or centrally, as many of the rural people involved may not be able to leave their places of domicile. In effect, town halls, fishing ports, school halls, basic literacy centres, and so on would serve as veritable centres for Non-Formal ELE on poverty eradication/alleviation. The content of the programme would promote the necessary behavioural

changes already outlined by UNESCO in table 2 of this paper and would aim to enhance individual and group participation in combating poverty through such activities as flood control and reforestation. Non-formal ELE would take the forms of awareness creation seminars, conferences, workshops and short training programmes to be designed and organized by commissioned environmental literacy education and community development experts/professionals from relevant educational institutions who would be jointly funded by the government through ecological fund provisions and by local and international donor agencies.

iii. **The Informal Mode of ELE**

In Informal education, generally, learning takes place spontaneously, unintentionally and accidentally. It is education that occurs outside an institutionalized or school setting and which is usually informative. It could take place anywhere and anytime. However, differences exist in delivery methods and materials between one mode of informal education and another, based on the objectives to be achieved and the nature of the target beneficiaries (Eheazu, 2016). In the context of the topic of this paper, the informal environmental literacy education being discussed is the type that would focus on the need for rural Nigerian populations to embrace the process of eradicating/alleviating the poverty endemic and eliminating its impacts (as already outlined by UNESCO under “suggested topics” in table 2 above). The ultimate aim would be the realization of UNESCO’s SDG 1 learning objectives. The media and related apparatuses, including the radio, the television, bill boards and mobile megaphones (where practicable) are among the avenues to impart learning via the Informal mode of ELE. Accordingly, well designed radio jingles and talks, television dramas, large attractive posters at strategic areas, as well as information passed through mobile mega phones and loudspeakers could provide requisite ELE to individuals and communities on mechanisms for eradicating/alleviating poverty and eliminating its consequences (also outlined by UNESCO in table 2 above). Here again, the services of environmental literacy and community development educators and professional artists would be required to design and produce the Informal ELE programmes which should be funded by government and through the collaboration of relevant NGOs such as are suggested by UNESCO in its “delivery approaches/methods” shown in table 2 of this paper.

SUMMARY AND CONCLUSION

Extreme poverty which has been endemic in Nigeria for decades reached its utmost level by June, 2018 when the country was declared the Poverty Capital of the World. Rural Nigeria has been known to have experienced more of the endemic than the urban entities. Nigeria’s successive political and military leadership over the years had applied various strategies (excluding environmental sustainability education) towards alleviation of the poverty syndrome without discernible success. When, in September 2015, the United Nations (UN) General Assembly adopted seventeen (17) Sustainable Development Goals (SDGs) to eliminate key systemic barriers to global sustainable development by 2030 with SDG 1 focusing on elimination of poverty in all its forms everywhere, education was made a major instrument for achieving the SDGs. After x-raying the learning objectives and contents of the environment-related aspect of the UN Education

2030 Agenda for SDG 1, this paper has gone further to articulate practically the feasibility of marching the learning objectives and content of the UN SDG 1 Education Programme with the corresponding elements of ELE in order to crystallize the role of ELE as a strategy for mobilizing Nigeria's rural populations for poverty eradication/alleviation within the framework of the UN Education 2030 Agenda for SDG 1.

In the light of the profound congruency in content, process and delivery modes between Environmental Literacy Education (ELE) and UN's Environment-Related Education Programme for SDG 1, the author of this paper has cogently arrived at the conclusion that ELE has a veritable role to play as a strategy for mobilizing Nigeria's rural populations for poverty eradication/alleviation in consonance with the relevant aspect of the UN Education 2030 Agenda for SDG 1.

Recommendation

Following the incisive discussion above on the topic of this paper and the conclusion finally arrived at, it becomes pertinent to strongly recommend adoption of Environmental Literacy Education as a strategy for mobilizing Nigeria's rural populations for poverty eradication/alleviation in combination with the relevant aspect of the United Nations Education 2030 Agenda for SDG 1.

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