

REPOSITIONING ADULT EDUCATION TO BOOST SOCIO-ECONOMIC TRANSFORMATION IN NIGERIA THROUGH INCLUSION OF ENVIRONMENTAL LITERACY

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ABSTRACT: *Briefly put, Socio-Economic Transformation (SET) as a concept, refers to a process of sustainable improvement in individual (per-capita) and national (Gross Domestic Product) incomes resulting in improved standard of living and poverty reduction through intra- and inter-sectorial mobility of labour, following quality education and skills development. Using this definition and available statistics to assess the current state of SET in Nigeria, this paper has shown the country's failure to achieve her related dreams, plans and visions over time. The contributions of Adult Education (AE) to SET in Nigeria have also been established in this paper to be limited by the virtual absence of environmental content in most AE programmes. Environmental Literacy (EL), on the other hand, has been shown to be imbued with significant environmental content related to SET, and which could remediate the said limitations of AE. Accordingly, the paper recommends repositioning of AE through inclusion of EL to boost Nigeria's SET. The country's National Commission for Mass Literacy, Adult and Non-Formal Education is recommended to pilot the repositioning process. Furthermore, the author of this paper has included here, a practicable diagrammatic model for possible adoption to facilitate the process of including EL in AE.*

KEYWORDS: *Adult Education, Environmental Literacy, Repositioning, Socio-Economic Transformation.*

INTRODUCTION

Clarification of the Concept of Socio-Economic Transformation

The word, *socio-economic*, is a compound word, a combination of two adjectives - *social* and *economic*. To understand the term, *socio-economic transformation*, one would need to grasp the import of the combined words (when separated) on the object or noun they qualify; and, in the present case, *transformation*.

According to Wikipedia (2019), social transformation refers to large-scale social changes; that is, changes in individual or group standing in relation to other people in society (social structure or class), as well as changes in social status and corresponding functions of members of society (social function) as demanded by the *social order* of the particular institution of society (social

institution) to which the individuals or groups belong (family, polity, economy, school and so on). Economic transformation, on the other hand could, in brief, be defined as the continuous process of moving labour and other resources within and across production sectors (including agriculture, manufacturing and services) for the purpose of bringing about large-scale social changes through overall economic advancement (Wikipedia 2019).

In the light of the above definitions, one would agree with Mpango (2012) that socio-economic transformation could be seen as the process in which an increasing proportion of economic output and employment is generated within and across different production sectors, thus creating large scale social transformation through a shift from agriculture-based societies to urban, industrial and/or service-based economies with sustained high Gross Domestic Production (GDP) growth rates resulting from improved access to quality education and skills development, improved per capita income and incidental reduction in poverty.

A close look at the above definition would reveal that purposeful and functional education/training/retraining for capacity development and occupational mobility are key to socio-economic transformation. Granted that Adult Education has an important role to play in socio-economic transformation in Nigeria because of its various relevant functional education and skills development programmes, which will be discussed here subsequently, the purpose of this paper is to show the need for and process of repositioning Adult Education (AE) through inclusion of Environmental Literacy (EL) to boost the contributions of AE to Nigeria's Socio-Economic Transformation (SET).

State Of Socio-Economic Transformation (SET) in Nigeria

Nigeria's dreams about SET in the country could be said to have been encapsulated in her various socio-economic reforms agenda expressed in the forms of policies and development plans. These include projected SET plans wrapped up in Visions 2010, 20:2020 and adapted to UNESCO's Sustainable Development Goals (SGDs) targeted for achievement by 2030 (UNESCO, 2017). The two Visions and the 2030 UNESCO agenda were launched in November, 1996, May, 2010 and November, 2015 respectively. Over time, none of Nigeria's SET plans/agenda has achieved its cardinal objectives. For instance, the currently (2019) on going Vision 20:2020 agenda came to be on 18th May, 2010 when it was obvious that the dreams associated with its predecessor, Vision 2010, would not be achieved within the few months left for it. Similarly, Vision 20:2020 itself has, at the moment, less than one year to achieve its critical assignment of launching Nigeria into the class of 20 most economically developed nations of the world by the year 2020.

Rural Socio-Economic Transformation, which has been a major focus of the SET policy plans and Visions of Nigeria since her independence in 1960, has not experienced a boost as envisaged. Eneh (2011, p. 26) has described the rural situation in the following words:

The greater population of the country dwelling in the usually isolated and neglected rural areas is trapped in absolute poverty and misery; a condition characterized by malnutrition, illiteracy, disease, squalid surroundings, high infant mortality

and low life expectancy, clearly beneath any reasonable definition of human decency. Literacy rate is discouragingly low and health, income size and nutritional status are far from being encouraging. The vulnerable groups, especially women and children, continue to suffer extreme deprivations which severally limits their growth and fulfilment as well as optimal contributions to national development.

Ehezuru and Akpabio (2018, p. 54) have also presented the matter of poor rural socio-economic transformation in Nigeria more factually as follows:

In most rural areas in Nigeria, basic infrastructure, where they exist at all, are too inadequate for meaningful development. The International Fund for Agriculture (IFAD) published in 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 total rural population in Nigeria was identified as poor. The situation hardly improved by 2018, in spite of national attempts at rural transformation through rural electrification schemes to encourage establishment of cottage industries, and Credit Schemes to Small and Medium Enterprises (SMEs) for improved productivity in farming and other rural occupations. This can also be said to be true of the 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 in 2001.

There is hardly any remarkable statistical difference in the Socio-Economic Transformation (SET) indices of rural and urban dwellers in Nigeria. For instance, the percentages of the populations of Nigerians living below a poverty level of less than \$1.00 per day in the rural and urban areas in 2005 were recorded by Nigeria's National Bureau of Statistics (NBS) to be 79.2% and 70.7% respectively (NBS, 2005). However, given the fact that the total population of Nigeria's rural areas has always been higher than that of the urban areas as confirmed by World Bank Statistics (2016), the difference in poverty level may be appreciable in real terms, with more of the poverty syndrome still in the rural areas. All in all, the important fact revealed by the above statistics and references is that Nigeria's efforts to eradicate poverty (which is the centre-point of the SET agenda in the country) have hardly achieved any significant positive result generally over the years. More recently also, it was documented that in 2018, eighty-seven (87) million Nigerians (about half the population of the country then) were living in extreme poverty, below \$1.90 a day (*The Leadership Newspaper, July 4, 2018*). These facts, obviously demonstrate the distressful state of Socio-Economic Transformation (SET) in Nigeria, over the years.

Adult Education: Its Practice and Relevance to Socio-Economic Transformation

Adulthood and Adult Education

To discuss the place of Adult Education (AE) in Socio-Economic Transformation (SET), a brief and eclectic clarification of the terms, 'Adult' and 'Adult Education' is necessary because of the various (and sometimes confusing) interpretations the terms have been subjected to in literature. The precise determination of who an adult is, for instance, is rather intriguing because of the legal, social, physiological and cultural considerations that have been associated with adulthood (Eheazu, 1998). To illustrate, an adult in some societies may be seen as one who has attained the age of 21 or more. In Nigeria on the other hand, adulthood begins officially at 18 when an individual is allowed to vote. In some cultural societies, physiological maturity (capacity for marriage and parenthood and the ability to undertake civic duties) is used as a parameter to determine adulthood. In this case, an adult may be 15 or 51; 18 or 81. Accordingly, one could sometimes come across such concepts as 'young adults', 'old adults' and 'older adults' (or 'senior citizens'). Along this line, the American Central Intelligence Agency (CIA) has used global demographic statistics to arrive at age ranges of children, adults (young and old) and older adults (senior citizens) as 0 – 14years, 15 – 64years and 65 years and above respectively (CIA World Fact Book, 2012).

The definition of what constitutes adult education is no less complex than the definition of an adult. For instance, Lowe (1970) unhappily notes that Adult Education is described by several nomenclatures. He observes as follows (Lowe, 1970, p. 3):

What appear to be more or less similar phenomena are described by a perplexing welter of names such as Fundamental Education, Social Education, Mass Education, Continuing Education, Life Long Learning ... Even the term 'Community Development' is often used as though it were interchangeable with 'Adult Education'.

Similar to Lowe's observation, there are other diverse terms used to describe Adult Education, such as those adopted by Liveright and Haygood (1968) and Nyerere (1971). To provide a remedy to the confusion generated in the definition of Adult Education, UNESCO in 1972 came up with a comprehensive definition of the concept (Adult Education) as follows (UNESCO, 1972, p. 2):

The entire body of organized educational processes, whatever the content, level and method, whether formal or otherwise, whether they prolong or replace initial education in schools, colleges and universities as well as in apprenticeship, whereby persons regarded as adult by the society to which they belong develop their abilities, enrich their knowledge, improve their technical or professional qualifications and bring about changes in their attitudes or behaviour in the twofold perspective of full personal development and participation in

balanced and independent social, economic and cultural development.

This definition has since propelled the philosophy and practice of adult education in many countries, including Nigeria.

Synopsis of the Aims and Scopes of Adult Education

The aims or goals of adult education are well captured in the above definition of the concept by UNESCO. As a discipline or professional field of study, Adult Education is classified into five divisions or components which have been briefly presented as follows (Eheazu, 1998, p. 21):

- i. Remedial; that is, making good the deficiencies many people experience through non-acquisition of certain levels of formal schooling.
- ii. Vocational, technical and professional. This division is concerned with either preparation for work or the recurrent need for up-dating and refreshing.
- iii. Health, Welfare and family life, including guidance about physical and mental health, family problems, parenthood, social security and consumer education.
- iv. Civic, political and community education, including instruction about national and international matters.
- v. Self-fulfilment, embracing all aspects of education undertaken solely for the enjoyment of the individual.

Further classifications of adult education made by Prosser (1969), Townsend Coles (1978) and other experts involve different combinations of the above divisions or components. Such combinations have also resulted in classification of Adult Education into Formal, Non-Formal and Informal modes/forms within which elements or contents of the above five divisions could be identified. Accordingly, the contents of adult education are situation-specific; that is, structured or determined with due regard to the needs and motivations of individual or group adult learners through the process of “clientele analysis and the incidental needs negotiations” (Eheazu, 1998, pp. 27-29).

In general terms, Formal Adult Education refers to systematically arranged education programmes for adults in which the learners are enrolled to follow established courses, either on part time or full time basis. The programmes are usually offered within the walls of institutions and run in accordance with established norms of school-type learning, such as a step-by-step level or system of learning and graduation. The first level of Formal Adult Education is usually called Adult Basic Education (ABE) which includes Adult Basic Literacy Education often referred to as education in the 3Rs (Reading, Writing and Arithmetic). Following the ABE, there may be programmes of Post-Literacy Education designed to enable learners to make up for deficiencies in their schooling or inability to have entered school at all. Such remedial post-literacy adult education programmes may cover the spectrum of the primary and secondary school curriculum and thus provide a basis for Continuing Education.

Non-Formal Adult Education, on the other hand, is out-of-school education which covers training and instruction outside the norms of formal education systems and ranges from individualized apprenticeships to nationwide mass literacy and mobilization. Thus, Non-Formal Adult Education may be vocational education (providing entrepreneurial training for various classes of beneficiaries), political or social education (for leadership training) or even large-scale rural mobilization programmes to develop rural communities on specified goals, including acquisition of desirable skills and attitudes.

Informal Adult Education provides learning accidentally, unintentionally or spontaneously as adults engage in their daily activities, including listening to radio broadcast and encountering some learning occasions at work or recreation. Unlike its formal or non-formal counterparts, informal adult education does not have any form of planning, stated goals or training. It is indeed a life-long experience which, like the non-formal type is not classified by levels.

Place of Adult Education in Socio-Economic Transformation

The place/relevance of Adult Education (AE) in/to Socio-Economic Transformation (SET) could be established with reference to three major elements of SET discussed earlier in this paper; namely, *social change* (involving individual or group changes in social status and function), *mobility of labour* (due to improved access to quality education and acquisition of desirable skills and attitudes) and *general socio-economic development* (as a result of improve per capita income/GDP and the concomitant reduction in poverty). A brief expatiation may be helpful under the various elements as follows immediately.

a) Adult Education and Social Change:

The role of Adult Education (AE) in promoting social change and its social incidentals could easily be seen from the comprehensive definition by UNSECO cited above and from the various human development programmes associated with both the divisions (vocational, life-long and so on) and modes/forms of AE (formal, non-formal and informal). One indeed would readily agree with Anyanwu (1987, p. 21) that “the central responsibility of adult education is the fostering of social change”. This responsibility is discharged through adjustment of the adult population to change by equipping them with the necessary awareness of current and imminent changes in the community or city and the necessity for such changes, as well as the knowledge and skills to participate in, adopt or adapt to the changes. The awareness creation, knowledge and skills development could come through any of the relevant components or forms of adult education already discussed in this paper.

b) Adult Education, Mobility of Labour and Improved Economy:

For adult education to bring about movement of labour within and across production sectors (as discussed in the introductory section of this paper), it must be designed to make its beneficiaries more efficient and versatile within and outside their initial production sector. For instance, adult agricultural extension programmes which provide farmers with instructions and

demonstrations on new methods and crops for improved production, and basic industrial training on how to move from primary to secondary production (cottage industry), are good examples of the capability of adult education to promote mobility of labour and improved economy. Additionally, Adult Education (AE) is also involved in further industrial training of workers – by providing pre-service basic orientation education to new hires or in-service (staff development) training for skilled workers to master new technologies and processes required of them by their employment. Such training programmes encourage versatility and mobility of labour, improved per capita income and the GDP, as well as the scaling down of the tempo of poverty.

c) Adult Education and General Socio-Economic Development/Transformation:

In the technologically-based global economy of the current 21st century, growing emphasis is being placed on the contribution made by people or what economists refer to as *human capital*, to economic growth and development. This situation is based on the theory that the contributions of individuals to economic growth depend on their human capital; that is, the knowledge, skills, competencies and other attributes that are relevant to economic activity (Grant, 2004). Contemporary definitions and measurement of literacy as a major driver of human capital have also expanded the concept to involve literacy skills of a country's population broadly articulated to include prose (capacity to read and comprehend written passages), document (ability to present/communicate personal thoughts and feelings in writing) and quantitative literacy (ability to calculate/compute in words and numerals). Consequently, developing the literacy skills and knowledge of the labour force is considered a key strategy for promoting national economic growth. This is in spite of the views of Psacharopoulos and Woodhall (1985) on the problem of determining what exactly the contribution of education is (the 'residual factor') to economic growth when considered along with other growth factors.

On the contribution of adult literacy to economic growth or transformation, the development of a number of new surveys that allow 'skill' to be measured more directly, has assisted researchers to tackle the residual factor issue. One such survey is the International Adult Literacy Survey (IALS) which provides measures of directly-assessed literacy skills for the population aged 16 to 66 years for twenty-three OECD countries. Using data from the IALS, one study that investigated the relationship between educational attainment, literacy skills and economic growth has shown, among other results, which direct measures of human capital based on literacy scores perform better than year-of-schooling indicators when explaining growth in output per capita and per worker (Statistics Canada, 2005). The implication of this is that raising the average level of literacy skills could yield larger economic returns. This clearly implies that investment in adult literacy is a good strategy for economic growth/transformation. However, in the context of the topic of this paper, it would be useful to examine at this stage, the feasibility of the expected boost in Socio-Economic Transformation in Nigeria if adult education incorporates Environmental Literacy.

Adult Education and the Environment

The above discourse on adult education practice and its relevance to socio-economic transformation would leave no one in doubt as to the potential contributions of various aspects of

adult education to socio-economic transformation. However, education without reference to environment appears to be incomplete or limited in scope, especially in matters concerning socio-economic growth processes which, of necessity, have their impacts on the environment. From the discussions so far in this paper, it is obvious that Adult Education has this limitation in its scope and content. The importance of environmental content in education is underscored by the philosophy of a finite earth and resources which points to the fact that the planet earth on which humans live has limited space and resources. 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.

Importance of Environmental Literacy (EL) in Socio-Economic Transformation

The Importance of Environmental Literacy (EL) in Socio-Economic Transformation (SET) 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 political 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". These revelations obviously support inclusion of EL in Adult Education (AE) which is the essence of this paper. However, before discussing the process of inclusion, it would be useful to highlight the content and forms of EL as well as its relevance to SET with particular reference to Nigeria.

Environmental Literacy: Its Content and Relevance for Socio-Economic Transformation

To facilitate proper understanding of the need for inclusion of Environmental Literacy (EL) in Adult Education (AE) to remediate AE's observed limitation and thus enhance its capability to boost Socio-Economic Transformation (SET) in Nigeria, it is important to highlight the structure of EL (components/content and forms/modes of delivery) and the relevance of EL to SET.

The Content of Environmental Literacy

Following the views of Roth (1992) and NAAEE (1999), the term Environmental Literacy (EL) could concisely be defined as referring to the acquisition of the attributes of an environmentally literate person which include basic awareness, knowledge and understanding of the human environment, its fundamental processes as an aspect of live-support systems and its associated

challenges. It also refers to possession of rudimentary skills, ability and positive attitudes by individuals and groups to deal with environmental challenges and to protect and preserve the environment as the resource base for sustainably meeting human needs. Roth (1992, p. 16) has outlined the content of EL as comprising:

... 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 the '*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.

Details of the expected attributes of the environmentally literate at the various levels are outlined in Eheazu (2010, pp. 125-127).

Relevance of Environmental Literacy to Socio-Economic Transformation

As already cited in this paper, the prevalence of widespread environmental illiteracy among political leaders in Africa (Ibikunle-Johnson, 1986) and among the various segments of the Nigerian population (Eheazu, 2019) has led to general inability to properly control or manage the natural environment and its resources both at the continental and the Nigerian national levels. The result, as has also been documented by the two sources referred to above is the prevalence of the syndrome of backwardness and poverty among the peoples of African generally and Nigeria particularly. Harping on the relationship between EL and effective management of the environment and its natural resources for socio-economic development/transformation, Ibikunle-Johnson (1986, p. 38) clearly propounds:

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 solution 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”.

Need to Reposition Adult Education (AE) through the Inclusion of Environmental Literacy (EL)

The importance of repositioning AE through inclusion of EL to boost SET in Nigeria can hardly find a better support than the above excerpt from Ibikunle-Johnson’s views on the relationship between environmental literacy and effective resource management for ultimate realization of social and economic welfare plans. Again, there is much in the excerpt that relates it to Roth’s (1992) definition and encapsulation of the content of EL cited above. In a related article also, Rugumayo (1983) has recommended acquisition of some skills by learners as a way to achieve the basic objective of using Environmental Education/Literacy to enable human populations obtain the necessary environmental awareness, knowledge and capacity for overall socio-economic transformation; namely:

- i. Basic Problem Solving Skills – which would enable the learners, through awareness creation, to recognize and define basic environmental problems; listening with comprehension; collect, organize and analyze information, generating alternative solutions and developing a plan of action.
- ii. Value – Clarification Process Skills – which will enable learners, when presented with an environmental problem, to suggest alternative solutions, consider the consequences of each alternative, express their feelings about each alternative, and make a free choice.
- iii. Community Problem Solving Skills – to enable the learners to define an environmental problem or issue, find more information about it, identify and evaluate alternative solutions, develop and implement a plan of action and evaluate the implementation.

Rugumayo's three levels of skills development appear to agree with Roth's (1992) three levels of environmental literacy and therefore will be integrated with them in recommending later here how to include EL in AE.

From the above discussion, there is no gainsaying the fact that EL is relevant to SET. What now remain to be discussed are the structure and modes of Environmental Literacy Education (ELE) delivery to enable final articulation of how to infuse the various levels and skills of EL into AE.

The Structure and Delivery Modes of Environmental Literacy Education (ELE)

Environmental Literacy Education (ELE) could be defined as the process of disseminating the 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:

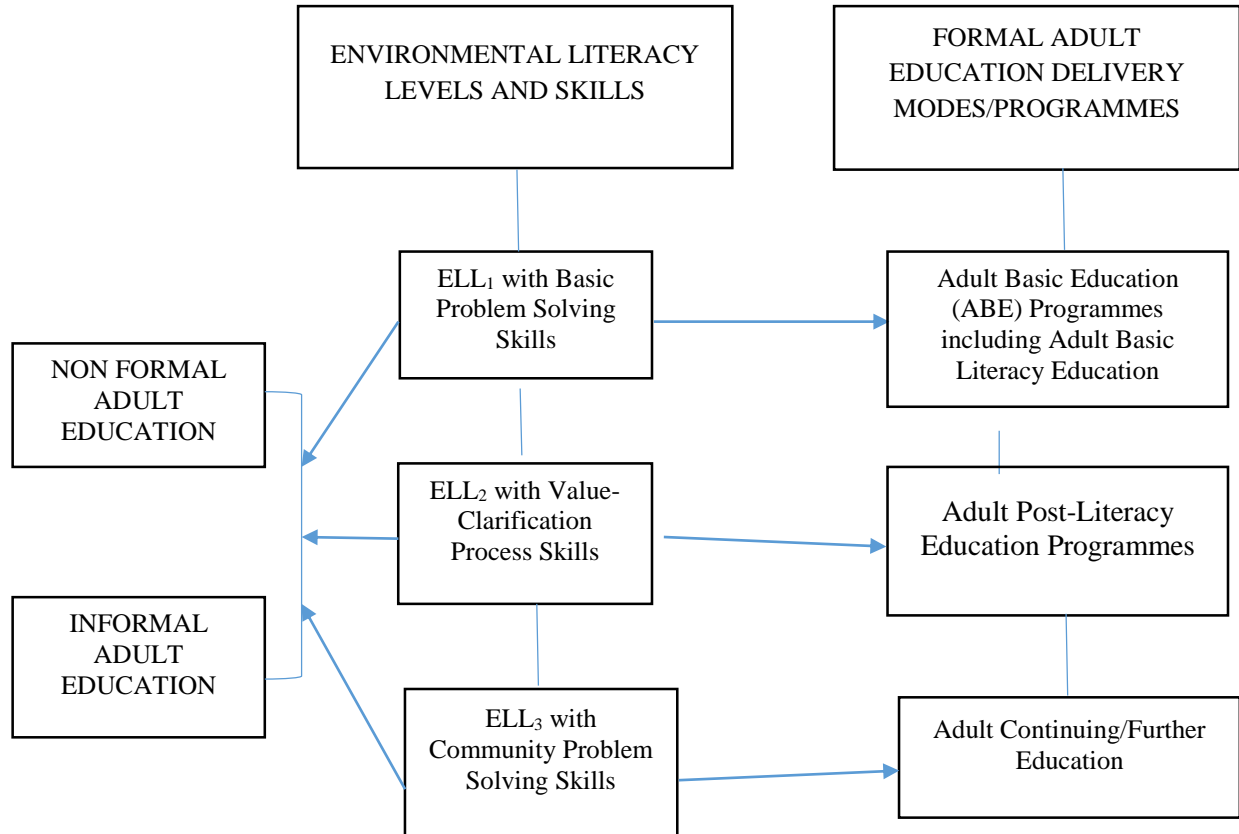
- i. Confidence in their ability, both individually and collectively, to influence decisions on environmental problems and issues; such as waste management and pollution control.
- ii. Assumption of responsibility for personal actions that would positively influence or avert environmental disasters.
- 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.

From the above expected outcomes of ELE, it stands clear that ELE has a multi-faceted structure which begins with basic environmental knowledge inculcation and acquisition. This basic knowledge component is driven by 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-faceted structure, if appropriately designed, would involve every level of education, including basic, formal and non-formal as well as higher education. This presupposes that ELE could take place through every form or mode of education – formal, non-formal and informal, with considerable attention paid to stressing the importance of viewing the environment within the context of the human influences and environmental literacy as a vital goal for society (UNCED, 1992, United Nations, 2002).

In the particular case of Adult Education (AE) which is the focus of this paper, the multifaceted structure of ELE could fit into the various formal modes/programmes of Adult Education delivery in Nigeria; namely, Adult Basic Education (ABE), including Adult Basic Literacy; Adult Post-Literacy Education, and Adult Continuing/Further Education, all of which have already been discussed in this paper. Selected and feasible contents of ELL₁, ELL₂ and ELL₃ and the associated skills, also already discussed, could be infused into the Non-Formal and Informal

Modes/Programmes of Adult Education. Fig 1 below shows a process model, suggested by the author of this paper, for inclusion of Environmental Literacy in Adult Education in Nigeria. It must be quickly mentioned that the Environmental Literacy Skills in the model could go with any of the levels or modes of EL and AE delivery, depending on felt need.

Fig. 1: Suggested Model for Inclusion of Environmental Literacy (EL) in Adult Education (AE) in Nigeria.



SUMMARY AND CONCLUSION

Socio-Economic Transformation (SET) has been succinctly defined in this paper as the process whereby an increasing and sustained improvement in individual incomes and Gross Domestic Production (occasioning reduction in poverty) are generated within and across different production sectors in an economy leading to large scale social change as a result of improved access to quality education and skills development. In view of this definition and failure to realize Nigeria’s related dreams, plans and visions over time, the state of the countries SET is described in this paper as distressful and fundamental to the existing pervasive and endemic poverty syndrome in the country. A synopsis of the aims, components and modes of both Adult Education (AE) and Environmental Literacy (EL) reveals that while the appreciable contribution of the former (AE) to SET is limited by the virtual absence of environmental content in its programmes, the later (EL),

possesses significant content and modes that could remediate the said limitation of AE. This remediation is necessary, especially with the exposure in this paper of the high level of environmental illiteracy with its negative impacts on environmental mismanagement and poverty alleviation in Nigeria. The entire presentation on the topic of this paper unreservedly evokes the conclusion that inclusion of environmental literacy in adult education would reposition adult education to make more pronounced contributions that would help to boost socio-economic transformation in Nigeria. To facilitate the necessary inclusion of EL in AE, the author of this paper has further presented diagrammatically a practicable implementation process model designed by her for that purpose.

Recommendations

In the light of the content of this paper and the conclusion arrived at, the author strongly recommends as follows:

- i. Inclusion of environmental literacy in Adult Education to help boost Socio-Economic Transformation in Nigeria.
- ii. Organization of a Workshop by Nigeria's National Commission for Mass Literacy, Adult and Non-Formal Education for the purpose of working out the process details of the necessary inclusion of Environmental Literacy (EL) in Adult Education (AE). Departments of Adult and Non-Formal Education in Nigerian Universities which run Environmental Adult Education (including Environmental Literacy) programmes should be involved in the Workshop.
- iii. The Federal Ministry of Education should sponsor the said workshop.
- iv. The implementation Model suggested in this paper for inclusion of EL in AE could be adopted as a guide to the recommended Workshop.

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