

CONTRIBUTIONS OF ADULT EDUCATION TOWARDS MITIGATING CLIMATE CHANGE IN NIGERIA

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Abstract

Activities of human beings on earth are the most relevant factors determining the future of the environment. The rapid growth of the population and materialistic ways of living have given rise to many climate problems. The need for Adult Education as a way of mitigating the effect of climate change cannot be over-emphasised since programmes organised for adults and adolescents will assist the community in managing the environment. In this paper, the concept of adult education is discussed, and the issues surrounding climate change and special aspects of climate change education are also defined. The method that can be used to educate people through Adult Education for transformation toward a sustainable future for the environment is explained. Suggestions were proffered on the kind of holistic change in thinking and action needed for the construction of hope and a sustainable future for the environment. The paper suggests that campaigns on climate change at the local level are needed. Furthermore, water resources are sensitive to the impacts of climate change. Thus, adaptation measures should be incorporated into the planning and development policies of government at all levels, among others. Analogical approaches to promoting full humanness in sustainable development in the environment are also put forward.

Keywords: Adult Education, Mitigating, and adaptation, Climate Change, Sustainable Development

Introduction

Education is a key factor in preparing societies for global changes. It plays a critical role in achieving sustainable development goals and putting into practice a global agreement on climate change. Adult education as an integral part of education is life-long in nature. It equips individuals with the knowledge, skills, attitudes and values capable of enabling them to derive maximum benefits from being members of the society. Adult education has an important role to play in helping to develop a workforce with the knowledge, skills and drive to develop a sustainable, green economy. The policy is recognised as a key vehicle for driving the uptake of climate change into education. Adult learning is an important element of the global response to climate change. It helps adults to understand and address the impact of global warming, encourages changes in their attitudes and behaviours and helps them to adapt to climate change-related trends. Adult learning is aimed at helping adults

to understand the impact of global warming today and increase “climate literacy” among adults. It does this by strengthening the capacity of adults to provide quality climate change education; encouraging innovative teaching approaches to integrate climate change education in school and raising awareness about climate change as well as enhancing non-formal education programmes through media, networking and partnerships.

Adult education encapsulates all forms of functional education programmes for youths and adults outside the formal school systems. Such as basic literacy, post literacy, environmental adult education, continuing education, and vocational education are programmes of adult education aimed at helping adults to prepare and get along with climate change in Nigeria. Furthermore, a unique characteristic of man is his ability to change his present condition from what may be seen as not conducive or comfortable to what he considers to be comfortable and conducive. Thus, no matter the effect of climate change, human being will survive. Eheazu (2013) observed that environmental adult education as a product blends the principles and goals of environmental education with those of adult education. Environmental adult education is aimed at sensitising the public by exposing them to the problems of drought brought about by climate change. It helps to master the environment in order to preserve it from degeneration because of climate change.

The activities of man that climate change may affect include: food, shelter, recreation, infrastructure, general development and other related activities that will make life comfortable for him. People need to be aware of the problems of climate change and their causes so that they can tackle such problems and avoid future occurrences for sustainable development of Nigeria. In addition, the misuse of man’s natural environment (resources) due to poverty, and ignorance, among others, results in negative impact on the environment (Onyenemezu, 2012). These are parts of the conditions which create climate change in the world and Nigeria in particular.

UNESCO (1978) as cited in Campbell (2008) and Ali (2019) defined education for the sustainable environment as an educational process of accomplishing sustainable community development, economic growth, and social and environmental production in an equitable manner. The heads of the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and

the United Nations Framework Convention on Climate Change (UNFCCC) agree that education provides the skills people need to thrive in the new sustainable economy; in areas such as renewable energy, smart agriculture, and forest rehabilitation, the design of resource-efficient cities and sound management of healthy ecosystems. Perhaps, education can bring about a fundamental shift in how we think, act, and discharge our responsibilities toward one another and the planet. Adult education is the education given to people (age 18 and above) in the society. The people regarded as adults are to develop their abilities, enrich their knowledge and improve their technical or professional qualification or turn them in a new direction to meet their own needs and those of their society (Nzeneri, 2010).

The Heads of States around the world gathered at the 21st Conference of Parties to discuss the international community's response to climate change (and out of which the Paris Agreement was born), the Education Hub launched a discussion on education's role in propelling climate action, to critically reflect the role of education in addressing the issue of climate change. Climate change was discussed as an urgent issue requiring global action and necessitating a shift in thinking and decision-making to account for destructive human-environmental interactions. Education is a necessary tool aimed at addressing climate change. Thus, education is recognised for its ability to empower, inform and motivate those engaged in the wider community and government to take action on climate change. The importance of integrating climate change into education, through curriculum-based, community-based and technology-based approaches cannot be over-emphasised.

Lack of awareness is a significant barrier to climate change adaptation in developing countries like Nigeria. Raising climate change awareness at the local level is important in Nigeria, as climate change impacts are exacerbating the number and extent of disasters in this disaster-prone country. Climate change is a broad term and has been researched widely in many disciplines. Climate change is the most serious global environmental issue of the present time. It is a serious threat to the security and prosperity of the world in the twenty-first century. Increased awareness assists in preparing and implementing climate change adaptation measures, such as adjustments in natural and manmade

systems to reduce the likely impacts of climate change. However, the major focus of climate change research has usually been on scientific analysis and its implications and overlooks the human dimension of climate change impacts in developing countries.

An increased sense of awareness and interest in disaster risk reduction in Nigeria can help to increase disaster preparedness through developing and forecasting early warning and evacuation systems. As some of these disasters, like floods and droughts, are related to climate change, it makes good sense to investigate what is known about climate change impacts and adaptation among various sections of society. Local planning officials are a group of stakeholders in Nigeria and elsewhere that have a strong influence over physical development. Improvements in their level of climate change awareness can lead to better adaptation outcomes in Nigeria.

Concept of Adult Education

Adult education, according to Okafor (1987), Oyebamiji (2015), is the form of educational enterprise which is properly planned and methodically applied primarily for the training, of those who have not benefited from the 'regular/formal' educational programmes at the primary and post-primary levels, functional literacy and some post-literacy knowledge acquisition whether the beneficiaries are adults, properly so called, or adolescents. The term "adult education" can also be used to designate that form of educational programme which is properly planned and methodically applied, for the provision of remedial, continuing, and or other aspects or forms of education to adults or adolescents outside the regular/formal educational system.

Olajide and Sijuade (2018) observe that educating adults will contribute to their self-reliance and personal autonomy, the exercise of basic rights and increased productivity and labour efficiency. Thus, when adults are well educated about their environment and its implications, they will be proactive on how to treat their environment. Adult education is a special form of education that is put in place to allow the adult learner to optimise his or her potentials and become relevant, productive and fulfilled; socially, economically and intellectually. It is a multidisciplinary approach to learning aimed at catering for myriads of problems areas that relate to adult welfare (Odiaka, 2018).

Adult Learning and Climate Change Awareness

Climate change is referred to as a clear, sustained change over several decades or longer in the components of climate, such as temperature, precipitation, atmospheric pressure, or winds. A deeper understanding of the climate change phenomenon is also very low among local government officials in Nigeria as compared to other developing countries. Adult Education is positively associated with environmental awareness such as climate change. Educated people are more concerned about their surrounding environment and they have better access to the information about the environment. Nigeria falls significantly behind many countries in providing access to education.

Global climate change impacts range from physical, to social and cultural aspects. Climate change is a great threat to the regions of developing countries because the effects of climate change are not equally distributed all over the world. The large and poor populations of developing countries are more affected by climate change impacts as compared to the rich developed countries. Developing countries, like Nigeria, are already suffering from high poverty levels and a scarcity of resources; populations of these areas are more vulnerable to the effects of climate change.

Water, energy and agriculture sectors will be affected the most by climate change impacts in Nigeria. This analysis shows that the consequences of climate change are very serious for Nigeria. While Nigeria will need much more food in future due to the pace of population growth, climate change is eroding even its current food production capacity. The local planning officials seem to understand that the situation is dire. Adult learning can be used to create awareness on how to manage the environment.

Thus, environmental challenges caused by climate change can be conceived as a life support system or ecosystem, within which a living organism interacts with the physical element (Benebo, 2014; Ali, 2019). Since the environment supports life, climate change will in return affect the environment positively or negatively. Adult education will help adults to adjust to weather forecasts since it is a lifelong education. Generally, environmental changes caused by climate change include the following:

Floods: It affects the coastal and river banks, flooding which leads to a rise in sea level, land degradation and resource degradation, stock depletion and habitat degradation.

Erosion: Erosion may result in loss of resources for other development, destruction of property and social amenities as well as loss of lives (Benebo, 2014). Nigeria experiences loss of lives in different parts of the country during the rainy season. This is due to the insensitivity of the leaders to the instructions from the ministry of environment and the lack of maintenance of the environment.

Drought: It occurs mostly in the northern part of Nigeria. It is a serious problem because of its resultant effect of desertification.

Environmental Pollution: An environmental problem caused by climate change in Nigeria. Boridam (2012) presented environmental adult education as education for the survival of man in his environment. Thus, air pollution can cause climate change that will affect people if they were not properly educated on how to manage the situation.

Oil Spillage: Oil producing areas and natural gas flaring, which is associated with problem of exploitation (exploration) and vehicle emission are also part of environmental pollution. However, the various types of gaseous emissions from industries in Nigeria greatly contribute to the depletion of the ozone layer and in turn contributes to climate change.

Importance of Adult Education to Climate Change to Nigeria

The first relevance and importance of adult education is to inspire a desire for change and motivate and the understanding that the change is possible (Igbo, 2011); Adult education will explain the complexity existing in climate change to adults and how to manage the situation when it arises; Adult education plays a paramount role in raising awareness and promoting behavioural change for climate change mitigation and adaptation; It helps increase the climate change mitigation and adaptation capacity of communities by enabling the individual to make informed decisions.

Furthermore, utilizing adult education approaches and its role in mitigating climate change in adult education, can be introduced into the curriculum of participants in all centres. This is because environmental adult education is purely for exposing adults to the knowledge of securing and preventing their environment for future use. Adults need to be properly informed through environmental adult education concerning changes in our environment caused by climate change and proffer solutions and ways of managing the situation. The role of adult education on knowledge about climate change will bring about the reconstruction of the security framework and preservation of our environmental

benefits for the present and the future generations. Viezzer (2011) contended that humans are a part of the chain of life and part of the preservation of the environment that sustains them in the ecosystem. He also described humans as being in 'the lap of mother nature'² which makes them a part of something greater in the sense that it places them in communication with nature and makes their relationship with other living species more of brothers and sisters of the universe.

Adult education will make adults understand how climate is changing so that they can prepare for the future. Studying climate change through adult education helps us to predict how much rain the next winter might bring, or how far sea levels will rise due to warmer sea temperatures. Awareness creation through adult education is very important as it brings a comprehensive strategy for building a sustainable future which is equitable for all humans as indicated by the Rio conference in 1992 (Ali, 2019). It is important that Nigeria develops strategies to build resilience against climate change and adult education is key to this development. It is not only a matter of mitigating the effects of climate change, but also of addressing, through educational resources, adaptation measures that will be specific to Nigeria. Currently, states with large numbers of youth may have low resilience to the effects of climate change and typically have social and political instability and a low level of governance. In addition, pressure should be placed on governments due to a combination of the increasingly negative impacts of climate change, and social, economic and political difficulties which could result in social unrest, instability and even conflict. Under the right environment where their economic and social needs are met through the provision of adult learning, the youth population can act as agents of economic growth. However, without this environment, the youths may resort to violence which can further destabilise political environments and heighten vulnerability to climate change. Due to the non-discriminatory and wide-ranging impacts of climate change, adult education has a crucial role to play in raising awareness about the urgency of addressing climate change programmes, including ways to be more energy efficient. Formal and non-formal education varieties are essential to educating citizens of all ages. Furthermore, for the youngest and future generations who will be most affected by climate change, positive influences during the stages of an individual's early life can contribute to a society that is equipped with the understanding, values, knowledge and skills to tackle the causes and impact of climate change.

Impacts of Climate Change on Developing/Low Income Countries

The impacts of climate change on the wellbeing of developing or low-income countries are enormous. The impact of climate change is most felt on human wellbeing in developing or low income countries. The most vulnerable groups include the poor, the elderly and children, traditional societies, subsistence farmers and those living on the coasts (Confalonieri, Menne, Akhtar, Ebi, Hauengue, Kovats, Revich, Woodward, 2007; Ali, 2019).

Agriculture: Almost all the developing countries are agriculture inclined/ agrarian. Climate change decreases livestock and crop production as a result of heat stress, droughts and flooding and climate-induced pest disease migration. The World Bank Group (2013b) projects 40-80 percent loss of cropland in Sub-Saharan Africa (which is used for staple foods and cash crops) by the 2030s-2040s, due to 1.5^oC-2^oC warming, drought and acidity.

They further observe the following:

Food Security and Safety: Greater risk of food shortages, and access to safe food due to air and sea temperature changes and increased contact between pest species and food.

Malnutrition: We shall have increased malnutrition and resulting illnesses, with an impact on child growth and development.

Coastal Systems: It will affect the sea level that rise, loss of coastline land, coastal flooding, extreme storms, water pollution, destruction of human settlements and local resources (e.g. fisheries and biodiversity) and forced migration.

Water Security and Safety: It will reduce drinking water, and precipitate more severe droughts, due to lower availability and quality of water; and increase the spread of water-related diseases and water contamination.

Human Settlements and Infrastructure: Human settlements and vital infrastructure will be at risk from rising sea levels, extreme weather events and desertification, which could result in forced migration.

Climate-induced disasters (e.g. storms, floods, droughts, fires and heat waves): Injuries, deaths and damage to housing, livelihoods and settlements, population displacement, impact on food production, malnutrition, infectious diseases and respiratory diseases and water contamination.

Infectious Diseases: Change in the level, range and intensity of infectious diseases due to temperature changes.

Economic and Socio-Cultural Resources: Reduction in income from tourism and agricultural production; and destruction of traditional, cultural and spiritual sites.

Women: Women are typically responsible for food preparation and sometimes production. Knowledge of adult education will help them to mitigate the impact of climate change. Education: Children are the most affected in the event of natural or man-made disasters. Schooling and learning systems are disrupted, affecting their right to education and inducing stressful situations. Developmental gains in education are reversed with the damage or destruction of school facilities or use of school facilities as refugee centres, thus resulting in prolonged disruption of education and limited access to learning opportunities.

Conclusions

Nigeria is a disaster-prone country and climate change impacts are exacerbating the number and extent of disasters. Rapid population growth, poor urban management, and non-implementation of various policies are creating a peculiar situation for the country. Nigeria's resilience in dealing with the adverse impacts of climate change is also very low because of the country's socio-political instability. Extreme poverty and a weak institutional capacity to effectively respond to the climate change impacts in Nigeria are also increasing vulnerability to existing disasters.

Adult learning can be used through awareness creation to adults on how to manage their environment but there are very few studies on climate change research in Nigeria. However, there is a need to strengthen the institutional setup to prepare and implement climate change adaptation strategies in Nigeria. Some policy referrals to deal with the issue of climate change by local government in Nigeria are as follows:

Climate change awareness - raising campaigns are needed at a local level in Nigeria since it is close to the grassroots; Local government setup in Nigeria should be strengthened to implement National Climate Change Policy; Potential climate change adaptation actions are needed at a local level to reduce the vulnerability of climate change impacts in Nigeria.

Water resources are very sensitive to the impacts of climate change. So, water resources adaptation measures should be incorporated into the planning and development policies of the government; Governments should take the lead in addressing climate change, employing a multi-sectoral approach to policy development; Effective integration of climate change topics into education must be done with an understanding of the root causes and the social, economic and environmental relationships at play; Education should be engaged as a mechanism to develop a workforce with the skills and knowledge to power green growth.

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