
Integrating Climate Change Education into Social Studies Curriculum at The Basic Education Level

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ABSTRACT: *The paper discussed the need to integrate Climate Change Education into the Social Studies curriculum at the basic education level. To achieve this, the concept of Climate Change Education, its effect on man and environment, and the need for its Education were discussed. Also discussed were the relationship between climate change education and Social Studies and possible areas where the tenets of climate education could be achieved via Social Studies curriculum content. The paper concludes that, creating the needed climate change awareness, which is the ‘Hallmark’ of climate change education could be made possible via corresponding topics in Social Studies curriculum and hence, recommends that, effective and efficient integration of concepts, learning experiences of both subject matters (i.e climate change and social studies), is a sin quanon, if man’s survival problem is to be addressed.*

KEY WORDS: integration, climate change, social studies, basic education level

INTRODUCTION

Education whether in opposite or in opposition is the search for personhood. It therefore follows that, individuals, organizations, institutions and societies must device means towards ensuring the actualization of this search.No wonder, Saro-wiwa in Dienye (1998),advocated for “An Education for Discovering”. To him, this discovery is not necessarily a scientific or technological one, but a discovery of what we were, what we are and where we are going. It is a discovering of our rights and privileges and what we need, to enable us achieve our desired goals.

It is a truism that, one basic function of education is the bestowal of status on the educated. And, in any educational system, there is always a planned curriculum in proper sequence of topics designed to prepare an individual in a specific skill or vocation. The curriculum is always drawn according to the philosophy of education and in Nigeria, the philosophy of education as contained in the National Policy on Education (NPE, 2004 revised) are:

- (a) The development of the individual into a sound and effective citizen;
- (b) The full integration of the individual into the community.

Also, one specific goal of education emanating from the philosophy is:

The inculcation of the right values and attitudes for the survival of the individual and the Nigerian society.

Today, the challenge imposed on the earth to provide the necessary raw materials, energy and waste disposal process for mankind production and consumption has had many consequences for health and ecosystem around the globe. The shelter, clothing, nourishment, mobility and other lifestyle components that make up humanity's basic needs and increasing western style consumption impose a significant impact on the environment, particularly as the earth population increases.

Of the many problems generated by our economic and industrial progress, climate change is one that has dominated the media, especially in recent times. (*Adapted from the UNESCO climate change initiative*).

The thrust of this paper therefore, is to create the needed awareness for Social Studies teacher as regards the skills needed for making climate change education part of the content of what they teach in the Social Studies classroom.

To achieve this therefore, the paper discussed the followings:

- The concept of climate change education;
- The risk associated with climate change or the effect of climate change;
- The need for climate change education;
- The relationship between climate change education and Social Studies; and
- The suggested areas for integration or integrating climate change education into the Social Studies curriculum.

The Concept of Climate Change

The United Nations Framework

The United Nations Framework Convention on Climate Change (UNFCCC) (2004) defined it as a change in climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

On their part, the intergovernmental Panel on Climate Change (IPCC) (2007), defined climate change as “any change in climate overtime, whether due to natural variability or as a result of human activity”. The same body also sees it as a phenomenon created by human beings and nature, which devastates the earth and causes hardship of unpredictable magnitude to living.

Medugu (2009) defined it as, “change which refers to an increase in average global temperatures caused by natural events and human activities, which are believed to be contributing to an increase in average global temperatures”. He went further to contend that, climate change has the potential of affecting all natural and human systems and may be a threat to human development and survival socially, politically and economically.

Climate change according to Moyinoluwa (2013), is seen as a significant and lasting change in the statistical distribution of weather patterns over periods ranging from decades to millions of years. Wikipedia (2009), it is seen as encompassing the statistics of temperature, humidity, atmospheric pressure, windfall, atmosphere particles count and numerous other metrological elements in a given region over a period of time.

Whichever way it is looked at, one thing is central about climate change. It is a phenomenon that has come to stay and a major challenge to development in the 21st century. All we need do is to see how we can create the needed awareness about it and its damaging impacts through its teaching via a relevant subject matter content. Social Studies indeed, provides a better platform for this to be achieved.

Ban Ki-moon, the United Nations Secretary-General has proclaimed climate change to be one of the defining challenge of our time to him. To him it is a global problem, and that, each of us has the power to make a difference. Climate change is a complex global problem because it intertwines with many other issues such as economic development and poverty reduction. Developing countries are the least responsible for climate change, yet, the most at risk from its effects. It is one phenomenon that has gripped the entire human race with awe, as a result of the devastation it has left in its wake. It started gradually with the emission of greenhouse into the atmosphere which in turn has destroyed the ozone layer that hitherto protects the race from direct rays of the sun.

The Risk Associated with Climate Change

As a complex global problem, climate change comes with its attendant risks, especially in developing countries where much has not been done in creating the needed awareness. Among these risks as put forward by Cities Alliance (Cities without Slums, 2009) are:

- Higher mortality rate, especially among children, women and the elderly. This, no doubt, is usually associated with low income settlements.
- There is also the issue of water and sanitation related illness, droughts, heavy or prolonged rains, flooding and conditions after disasters and all intensify the risks from water and sanitation

all resulting from climate change. Also, children are usually vulnerable because their play behavior can bring them into contact with pathogens, which the resultant effect might be death.

- Malaria and other tropical diseases is yet another risk associated with climate change. Warmer average temperatures are expanding the areas where many tropical diseases can occur, with children most often the victims.
- Heat stress: this is also a risk associated with climate change. Under here, young children and the elderly are at highest risk from heat stress, especially in poor urban areas where high levels of congestion and little open space and vegetation.
- Malnutrition: This results from food shortage, for instance, interruptions in supplies during sudden acute events.
- Injury: Due to their size and developmental immaturity, children are particularly susceptible to injury and are more likely to experience serious and long term effects from burns, broken bones and head injuries.

In recent years, the effect of climate change has been felt in both the developed societies and the developing societies. This could be seen in the melting of the ice, thereby resulting in rise in sea level of many low land areas causing flooding, droughts, low temperatures, global warming, dwindling revenues, deforestations, diseases, to mention but few.

Other effects of climate change as cited in Awake in Nwika and Kpee (2011) the danger associated with climate change are thus:

Large Island may disappear

- Rising temperature could intensify storms, floods and droughts.
- Shortages of fresh water (for same population) may increase.
- Risk of life of thousands of animal species may increase.
- Rising temperature will foster spread of diseases as insects like mosquitoes, ticks and other disease carrying organisms like fungi spread further afield.

Adelekan (2009), commenting on the effects of climate change in Lagos looked at its effect on communities, households and individuals.

On communities, it has the following effects

- Rise in sea level with associated flooding of the coastal areas.
- Damage to roads.
- Disruption of movement.
- Dirty environment.
- Flooding of community.
- School children prevented from going to school sometimes.
- Growth of slumps.

On Household

- Damage to and deterioration of building infrastructure.

- Flooded houses and rooms.
- Prevalence of malaria.
- Lack of potable water.
- Homelessness.
- Destruction/ damage of household properties.
- Diseases.

On Individuals

- Poor health status results from unnecessary sickness including skin diseases. Restrictions on social relationships
- Disruption of economic and livelihood activities; and
- Scarcity of food; among others.

Need for Climate Change Education

The need for climate change education especially at this level of education and in our development cannot be overemphasized. It is needed because of the many problems generated by our economic and industrial progress, climate change is one that dominates media headlines in recent time. It is also needed because, the current warming trend of the earth's atmosphere that started with the industrial revolution has given scientists, politicians, and individuals around the world calls for greater concern.

Dramatic reduction in seasonal sea ice at the earth's poles, rising sea level, shifts in precipitation patterns leading to extended droughts or flooding and more frequent extreme weather events are just some of the effects of global warming and changes to the global climate. The human toll in lost of lives and livelihoods are mounting, particularly in Africa and the Small Island Developing States (SIDS). (Adapted from: The UNESCO Climate Change Initiative, 2010).

No country will remain unaffected, thus making it clear that, climate change education, mitigation and adaptation are necessary to address one of the greatest challenges faced by the world today. Climate change education concerns the wise use of the environment so that, it can be of maximum benefit to the largest number for as long as possible. It is an education that recognizes values and clarified concepts in order to develop skills and attitude necessary to understand and appreciate the interrelatedness among men, their culture and biophysical surrounding. It also entails practice in decision making and self-formation of code of behavior about issues concerning environmental quality.

The fact being made here is that, climate change education seeks to improve all ecological relationships between humanity and nature. Its goal therefore, is to create the needed awareness on issues relating to the environment. Furthermore, this type of education must be seen as a lifelong process, hence, the idea of incorporating it into the school curriculum and especially that of the

Social Studies is just one of the ways of ensuring that a better foundation is laid to handle its impact on our lives and the society at large.

Relationship between Climate Change Education and Social Studies

Of a truth, there is a synergy between Social Studies and climate change education. It is not the task of this paper to provide series of definitions of the subject matter Social Studies and the whole gamut of objectives which it is designed to pursue. However, it should be made clear or stated that, a good Social Studies programme should be that, which provides opportunities for learners to become equipped with appropriate values, attitudes, skills and knowledge necessary for studying the necessary relationship between man and his environment in order to identify his problems of survival and proper solutions to them.

If this idea is related to the meaning of climate change and its education, it is then not out of place to quickly note that, environmental problem (which climate change is one) of survival for man, *and* an attempt to provide an education programme that would help solve it, is still within the realm of Social Studies, hence the need for this integration. For instance, a critical look at one of the objectives of teaching Social Studies at basic level (JSS to be precise) which says:

“To create an awareness and an understanding of the evolving social and physical environments as a whole, its natural, man-made cultural, spiritual resources together with the rational and conservation of these resources for development”

In the same vein, if one believes in the objective of climate change education which concerns educating ourselves on matters relating to the environment in order to improve our awareness about the environment, one would see that, this is not quite different from the Social Studies objective already identified.

In view of the recognition of Social Studies as a school subject which aims at identifying and solving man's problem of survival, it is therefore necessary to expose practicing Social Studies teachers to climate change education, so that, they can help to better propagate the principles of climate change education in their classrooms.

Integration of Climate Change Education into Social Studies Curriculum

This subheading looks at possible areas of integration between social studies and climate Change Education that is, topics in Social Studies where climate change can be effectively and efficiently taught to the students.

Social Studies Topics	Climate Change Education
(a) Definition and objectives of social studies	(i) Goals of climate change Education and relationship to the objectives of social studies concepts in climate change education related to social studies concepts.
(b) Man's physical environment	(i) Effects of industrial pollution on man's physical environment. (ii) Controlling pollution from the physical environment.
(c) Social environment	(i) The home and waste generation effects on man and control. (ii) Man-made sources of environmental pollution-effects and control. (iii) Overcrowding
(d) Cooperation and conflict	(i) The conflict between man and nature. (ii) Land use and abuse
(e) Civic rights and responsibilities	(i) Duties of citizens and the government in controlling climate change environmental pollution as well as output levels. (ii) Citizens actions for the environment.
(f) Science and technology	(i) Approaches to greenhouse emissions, ice melting, rising temperature which could intensify storms, floods and droughts control; educational and technological effort i.e use of science and technology to cause and control climate change.
(g) Culture and identify	(i) Identifying and improving some cultural patterns that reflect the keeping of clean and pollution free environment. (ii) Identifying cultural practices that create environmental problems and suggesting solutions to the problems. (iii) Our value system and evolution of environmental problems.

In all, these and many others, are possible areas of integration between social studies and climate change education, that is, climate change issues as presented in this paper can be comfortably and effectively taught via the corresponding social studies topics as stated. All that is expected is for social studies teachers to employ appropriate teaching methods, techniques, strategies, and approaches that are quite effective based for effective integration.

CONCLUSION/RECOMMENDATIONS

In view of the need to formally create climate change awareness in our learners (youths to be precise) it has become highly important for Social Studies teachers to ensure that they seize any available opportunity to derive home as many climate education core messages as possible both in theory and practice during the teaching/learning process. They should also emphasize the measures that would help control the problems associated with climate change at the input level rather than at the output level. This, it is believed, would help reduce the multiplicity of our environmental problems which would constantly be begging for attention if man have to survive.

Based on this, it was recommended that the teaching and learning of climate change issues via Social Studies education should go beyond mere knowledge acquisition to the development of problem-solving skills which will help provide appropriate and adequate solutions to man's survival question in his ever changing environment. It was also recommended that, activities or innovative teaching strategies be employed in its teaching, i.e those that encourage participation and group work.

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