

Mainstreaming Sustainable Development into African School Curricula: Issues for Nigeria

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"Our biggest challenge in this new century is to take an idea that sounds abstract sustainable development and turn it into reality for all the world's people" (United Nations, 2001).

Abstract

This paper examines sustainable development within the context of issues arising from the UN's declaration of a Decade of Education for Sustainable Development (ESD), 2005-2014. Africa's mode of response to the ESD challenge could be gleaned from the New Partnership for Africa's Development (NEPAD). Nigeria already has a National Conservation Education Strategy which predated NEPAD and may serve as the launching-pad for ESD-related activities and strategies for the development of appropriate knowledge, values, skills and perspectives. This paper posits that the country will only make a success of its current efforts if there is the political will to learn from past mistakes and borrow from best practices across the globe.

Introduction

The United Nations (UN) General Assembly's adoption of a Decade of Education for Sustainable Development (DESD), in 2002, was in recognition that current economic development trends are not sustainable and that public awareness, education, and training are key to moving society toward sustainability (McKeown, 2002). However, DESD poses different challenges to countries and regions of the world. This is because of peculiar situations they face in the task of bringing about changes in knowledge, skills, values, and perspectives related to environmental, economic and societal issues that impinge on the arrival of a new paradigm for intergenerational development implicit DESD. The task is particularly daunting for Africa in view of its widespread poverty, illiteracy, diseases and underdevelopment.

For Africa to make a significant showing in the DESD requires a critical appraisal of its developmental challenges with a view to identifying educational policy options for action. This paper was conceived within that context with three goals in mind: first, to examine the implications of the concept of sustainable development for the African continent with reference to the DESD; second, to highlight curricular elements in mainstreaming sustainable development into African schools with focus on Nigeria; and third, to re-focus some likely problems and issues associated with promoting the new paradigm of sustainable living in Nigeria and Africa. Materials for the study were generated through secondary sources. Thus, the analysis was based on a review of related literature and documents available mainly in libraries and electronic media.

Sustainable Development and Education for Sustainable Living

"Sustainable development" has meant different things to different writers. Some have tended to focus on production and thus narrowly viewed it as a process of achieving a buoyant economy (e.g. Stepanov, 2004; Adesanya, 2004). For those who focus on the natural environment (e.g. Taranets & Alyona, 2004; Raheem, Hanninem & Ogunyemi, 2004), sustainable development is all about achieving an ecological balance. And yet for others (e.g. Scoullos, 2004; Newman, 2004), the process goes beyond what is expressed in these two narrow perspectives, to include all what humanity and nature require for their existence both at the present moment as well as in the future. This last perspective is particularly evident in the popular report of the World Commission on Environment and Development (WCED) which asserts that sustainable development is "a process in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations" (WCED 1987, p.43).

This definition of sustainable development has been amplified to integrate issues of economic growth, social development and environmental protection following the Rio Earth Summit of 1992 and the Johannesburg World Summit on Sustainable Development (WSSD) of 2002. Documents emanating from the conferences and other international and regional forums suggest that sustainable development is anchored on three pillars of sustainability: environment, economy and society. The emerging consensus shows that sustainability principles emphasize that the pursuit of economic viability as an end in itself, driven by a neo-classical model of economics, does not maintain or enhance ecological health and human well-being (Newman, 2004).

Chapter 36 of Agenda 21 of the Rio Summit underscores the importance of education in achieving sustainability principles or sustainable living. The Rio conference specifically called on all countries to develop and implement an Education for Sustainable Development Strategy by 2002. The World Conservation Union explains that, since Rio and Johannesburg, Education for Sustainable Development (ESD) has been understood beyond the traditional view of education about sustainability which focuses merely on dissemination of knowledge. Rather, ESD is seen as a process of adaptive management and systems thinking, requiring creativity, flexibility and critical reflection. And central to this process is learning to access and influence systems for public participation for decision-making (IUCH, 2003).

The core objective of ESD, according to UNESCO, is the promotion of values and ethics through education at different levels, in order to make an impact on people's lifestyles and behavior and help to build a sustainable future (Tilbury, 2002). It is designed to motivate, equip and involve individuals and social groups in reflecting on how we currently live and work, in making informed decisions and creating ways to work towards a more sustainable world. Indeed, it is about learning for change amongst adults and youth in order to achieve sustainable living (IUCH, 2003).

While synthesizing earlier reports, UNESCO (2003) identifies four principles or conditions of sustainable development (SD) accompanied with associated educational skills for attaining them. The first condition is "recognition of the challenge"; this

requires skills in "learning to know". Secondly, SD demands "collective responsibility and constructive partnership": the skill needed here is "learning to live together". The third condition for attaining SD is "acting with determination"; this calls for skills in "learning to do". The last principle of SD is "the indivisibility of human dignity"; with the educational task of "Learning to be". To implement these principles within the ESD framework, UNESCO (2003) highlights four domains which are basic education, reorienting existing education programs, developing public awareness and understanding of sustainability, and training. It is thus hoped that the implementation of the SD principles in concurrence with the associated educational tasks, within these four domains, would translate into sustainable living.

In more practical terms, effective implementation of ESD principles among nations of the world is expected to crystallize in the attainment of the Millennium Development Goals of the United Nations. These goals include halving the proportion of people living below the poverty line; halting and reversing the spread of HIV/AIDS; halving the proportion of underweight under-five year olds; halving the proportion of people without access to safe drinking water; and achieving universal primary education. Others are reducing maternal mortality ratios by three quarters; reducing under-5 mortality by two-thirds; reversing loss of environmental resources by 2015; and achieving equal access for the boys and girls to primary and secondary schooling by 2015. A tenth goal that has been suggested for Nigeria (and possibly other African countries) is "the need to consolidate democracy as its process is likely to serve as a catalyst to the minimization or eventual elimination of poverty in the social formation" (Yaquab, 2003).

Without doubt, most of the issues raised in the millennium goals focus on the developmental challenges facing Africa today and, thus, underline the critical relevance of ESD. The New Partnership for Africa 's Development (NEPAD), regarded as the blueprint for the continent's response to the SD challenge, targets eight areas of priority in promoting a healthy environment: combating desertification, wetland conservation, invasive alien species, coastland management, global warming, cross-border conservation areas, environmental governance, and financing. However, the NEPAD's conceptual domain has been viewed as narrow in the context of ESD (Okidi, 2003). Globally, only a handful of nations have drafted strategic frameworks for advancing the process of implementing an Education for Sustainable Development Strategy as demanded by the Rio Summit. Most of these countries are from the northern hemisphere; including Netherlands, Australia, Spain, the United States and United Kingdom. Whatever approach Nigeria and other African countries eventually come to adopt, the school system would certainly occupy a centre-stage position.

Mainstreaming Sustainable Development in School Curricula

As the UN Secretary-General, Mr. Kofi Anan, in the quotation used to preface this article indicates, the greatest challenge about SD is how to translate it to practical realities in the lives of people. Within the framework of ESD, reorienting existing education programs demands rethinking and revising education from nursery school through university, to include a clear focus on the development of the knowledge, skills, perspectives and values related to sustainability. "This", according UNESCO (2003), "implies a review of existing curricula in terms of their objectives and content to develop transdisciplinary

understandings of social, economic and environmental sustainability". UNESCO further calls for a review of recommended and mandated approaches to teaching, learning and assessment so that lifelong learning skills are fostered. Skills to be fostered, in the process include skills for creative and critical thinking, oral and written communication, collaboration and cooperation, conflict management, decision-making, problem-solving and planning, using appropriate ICTs and practical citizenship.

What the foregoing suggests is the urgent need for curricular review to respond adequately to the challenges of ESD in Nigeria in particular and Africa as a whole. Curriculum, in this context, is taken as the totality of the experiences learners acquire under the guidance of the school. Such experiences could be distilled into three: program of studies, program of guidance, and program of activities. The program of studies essentially focuses on the basic academic learning (involving school subject contents packaged as Social Sciences, Humanities, Sciences, etc.). The program of guidance involves things like remedial support for weak learners and counseling in career choice (e.g. choice of school subjects). Activities involved in the third component are involvement in voluntary associations, participation in community projects, drama, games and sports and such other events that were traditionally termed "extra-curricular". Curriculum, therefore, transcends the conventional compartmentalized school subjects listed on the school time-table and calls for the integration of theoretical and practical experiences of learners all through school life.

Curriculum theorists like Wheeler (1973) and Ivowi (1998), have come up with various elements of the curriculum building or review process ranging from four to six. An overview however indicates that the main issues about curriculum revolve around four basic elements. These are statement of objectives; selection and organization of content; identification of materials and methods; and evaluation of effectiveness. Applying these elements to curriculum review in relation to ESD in Nigeria would suggest a number of strategies and activities which include the following:

Revisiting the objectives and policies of education: Two aspects of education are often cited in various documents and declarations. First is "Education for All" (EFA) which, according to the Dakar Framework for Action and the Millennium Declaration, concerns primary schooling for all children everywhere, boys and girls alike. The second aspect is "Education for Environment and Sustainability" or "Education for Sustainable Development" (EfES or ESD) which, according to article 36 of Agenda 21 and the Thessaloniki Declaration should be strengthened and included directly and indirectly in school curricula and at all levels of formal, non-formal and informal education (Tilbury, 2002). Drawing inspiration from global and regional declarations and targets, nation states are expected to set targets for giving focus to ESD-related activities. Nigeria's National Policy on Education (Federal Republic of Nigeria, 1998) has set out some broad outlines on individual and collective responsibility towards the development of the society. However, both the national policy and the country's constitution (1999) seem non-committal on the right to education which is critical to the attainment of the millennium goals as well as the objectives of ESD.

Selection and organization of content: Introducing ESD issues into school programs as "new" content materials presupposes at least three activities: analysis of existing subject

contents, decision on mode of integration, and active involvement of stakeholders to guarantee acceptability and continuity. There is presently no consensus on what constitutes environmental problems and the entire selection process is likely to yield better result through what Kaivola and Houtsonen (2001) call "collaborative knowledge building". This involves listening and sharing solutions, from local government to local government, and from community to community. A lot of inspiration could be drawn from examples of informal approaches like story telling and religious or cultural festivals to motivate people, connect with them and share ideas (Tilbury, 2002). This could be followed by content analysis of existing school subjects to identify needs and gaps for plugging in the issues they think are of practical relevance within a synergy of global, regional, national and local perspectives.

The point must be stressed, however, that school time-table at the primary and secondary levels in most countries (including Nigeria) are already over-loaded, and it may be a futile exercise trying to carve out another separate subject called "Sustainable Development". In the same vein, it is inappropriate to assume that sustainable development lies solely within the precinct of natural science, as it equally has its roots in cultural values, ethics, and human behavior with significant bearing in humanities and social sciences. For a country like Nigeria where a core-curriculum on Environmental Education (EE) had been developed since the early 1990s (Ogunyemi, 1998), what may be needed is building on past efforts as EE "is (only) undergoing a transition to education for sustainable development" (IUNC, 2002).

Materials and methods: The peculiar requirements of EE and ESD call for innovative methods in view of our emerging information society (Kaivoh & Houtsonen, 2001). Indeed, nobody really knows how to meet the new demands of sustainability, and what is required is a social process that involves people in creating a new way of living a good life, that is equitable, and that safeguards diversity, productivity and resilience of the ecosystem (Tilbury, 2002). This calls for new processes less oriented to instruction and more oriented to action for sustainability. For example, the sourcing of information on environmental problems through local newspapers, magazines, field trips, video tapes, radio programs and action research is likely to drive home the messages faster and deeper than the traditional teacher-dominated classroom teaching. Approaches like values clarification and problem solving that present learners with options and critical thinking for action are also likely to be more successful in promoting sustainable living (Abdullahi, Agho & Olarinoye, 2000).

Such strategies help teachers to construct knowledge collaboratively to solve problems, including environmental problems. Community-school relations would have to be fostered more strongly than ever before, for example, through the use of experts within the community and among the Non-Governmental Organizations (NGOs) as resource persons in addressing issues like traditional ways of controlling erosion, forest conservation, and pollution. As Kaivola and Houtsonen (2001) demonstrated in Finland, it is possible nowadays to integrate the special knowledge and skills of different professionals asynchronously using the Internet and computer programs which allow participants to contribute notes and comment on views and notes. Kershaw (2002) also reports that, in response to the Earth Summit in Rio, Local Authorities in Dorset (England) worked with Voluntary organizations, consulting over visions and agreeing

on the actions needed to enact those visions. This eventually gave rise to the County Council's Agenda 21 Strategy and the implementation of a wide range of initiatives with a Community Education focus.

Evaluation of effectiveness: Sustainability principles emphasize immediate application of knowledge to demonstrate gains rather than the traditional pencil-and-paper achievement tests. Even where test of information acquisition is involved, the weight allotted to the recall domain would certainly be less than that of students' demonstrated ability to solve practical problems within their locale. How many issues of pollution, environmental sanitation, use of water resources, loss of biodiversity, etc has a student addressed in the last one week, month, term or year within and outside the school? How often do students draw correlations between certain school activities like sports, agriculture and sanitation and sustainable development? Students' anecdotal records, direct observation, and responses to questionnaires are some of the techniques which could produce clear indicators of effectiveness of an ESD strategy in school curricula. Initial problems associated with these and other innovative evaluation techniques could be minimized with a well-thought collaborative framework within and outside the school system.

Policy Issues and Problems for Nigeria

Implicit in the outlined strategies and activities are some fundamental policy issues and problems that need to be addressed for success in Nigeria 's efforts to promote ESD. The first and perhaps the most important is the absence of political will. Nigeria embarked on activities aimed at integrating environmental education (EE) into school curricula in the early 1990s following the dumping of toxic waste in a Nigerian village, Koko, by an Italian company. With the active participation of leading NGOs in the country and technical support of the World Wide Fund for Nature (WWF), the Nigerian Conservation Education Strategy (NCES) was developed in 1992. Since then, however, nothing significant seems to be happening as the prototype curriculum which should have formed the take-off point for sustainable development in school curricula, is yet to be fully implemented. This tends to reinforce the widespread notion that the Nigerian (and African) problem is not formulating good policies, but that of implementation (Okidi, 2003).

Teachers are indispensable partners in the successful implementation of environmental education or its more expanded variant called ESD (Kaivola & Kaasinen, 2001). Their empowerment in the knowledge, skills, values and methodology of sustainability principles is bound to have a multiplier effect on learners in both the formal and informal education sectors. However, recent assessments of the state of pre-service and in-service teacher education in Nigeria point to feelings of neglect, alienation and disenchantment (Ivowi, 1998; Ajayi, Ogunyemi & Sotonade, 2004). When teachers are paid poorly and/or irregularly, they cannot be expected to put in their best in implementing school curricula and will certainly not act in manners capable of fostering development in the short or long term. From all indications, it seems the problem is quite overwhelming for the present operators of Nigeria 's Universal Basic Education (UBE) program which covers the primary and junior secondary school levels.

Another related issue is poor funding of education, including teacher education. Most Nigerian schools are presently in a sorry state characterized by dilapidated structures, overcrowded classrooms, poor staffing, and unavailability of basic teaching and learning materials, including computers. With the exception of the few elite schools in urban areas, Nigerian primary and secondary school students are made to learn under difficult conditions thereby stalling their creative ability and development into reflective young citizens as demanded in education for sustainable development (Ajayi, Ogunyemi & Sotonade, 2004). Teacher education institutions such as colleges, university institutes and faculties of education are given second-rate treatment as against those associated with elite professions like medicine and law, with adverse effects on self-image and occupational prestige of teachers in training as well as those who train them. Under such circumstance, it becomes pretty difficult if not impossible for teacher educators to undertake meaningful research that would equip them as the reservoir of human resources of trainers in sustainable development issues and strategies.

Another likely difficulty in this context is matching words with action. Sustainable development demands that we marry theory with practice. National governments are supposed to demonstrate leadership by mainstreaming ESD into all sectors and activities - agriculture, sports, recreation, health, industrialization, construction, etc (Okidi, 2003). For example, a critical assessment of Nigeria's national goals vis-à-vis daily activities of those in government does not support the acclaimed desire for "a land full of bright opportunities for all citizens" given the wasteful use of resources by those in government, pervasive and cries of marginalization from various segments and sections of the Nigerian society (Yaqub, 2003).

In addition, political instability in Nigeria and much of Africa makes policy continuity almost an exception rather than the norm. Policies seem to come and go with governments that enunciate them. This is particularly so under the military regime which was in the saddle for about three decades out of Nigeria's 44 years of political independence. ESD requires a number of sub-regional, regional and global cooperation and commitments to succeed (Okidi, 2003), and unless the country stabilizes its democratic infrastructure, it might lose out in the current efforts to use education for promoting sustainable development.

The workability or otherwise of NEPAD as a regional framework hinges on good governance. And, as Okidi (2003) observes, African governments need to look more inward and not place too much hope on the \$64 US annual grant promised them by their foreign partners or donor agencies on the condition of good governance. The countries of the North are more interested in the raw materials which those of the South supply industries in Europe and America than doling out free gifts. African countries are not currently in a position to process their own raw materials for the development of their people. They continue to exploit their natural resources in unsustainable manner, in order to mobilize funds for purchasing the finished goods produced in the North. Apart from the associated ecological problems, they are at placed at two receiving ends since countries of the North determine both the prices of the raw materials as well as those of the finished products.

It is widely believed that Nigeria, for example, has enormous resource potentials that, if carefully explored and critically exploited, could truly make it one of the greatest countries in the world. Failure in this respect borders largely on leadership (Yaqub, 2003). Legal frameworks, education and policy controls may therefore not achieve much in promoting sustainable development in Nigeria and other African countries without the requisite supportive environment.

Conclusion

This paper set out to analyze the implications of the UN Decade of Education for Sustainable Development (DESD) for curriculum reforms in African schools with particular reference to Nigeria. It is discovered that some activities in the areas of universal basic education, curriculum reforms and promotion of democratic institutions going on in the country have potentials for sustainable development. However, it could be concluded that much need be done in mainstreaming ESD concepts and issues into school programs as well as moving Nigeria along the path of sustainable living envisaged in the millennium goals and NEPAD.

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