Education and Development Disconnect in Nigeria: Education for Sustainable Development (ESD) as the 21st Century Imperative for Nigeria's National Transformation, Sustainable Development and Global Competitiveness

Leonard Chidi Ilechukwu
Arts Education,Faculty of Education,University of Nigeria, Nsukka
Email: chidileo@yahoo.com

Collins Chibuzo Njoku
Institute for Development Studies,University of Nigeria, Enugu Campus

Felix Okechukwu Ugwuozor
Education Foundations,Faculty of Education,University of Nigeria, Nsukka

Abstract

The paper examines Education and Development Disconnect in Nigeria and makes a case for education for Sustainable Development (ESD) as the critical path to Nigeria's sustainable development and global competitiveness. The paper submits that education is the pivot of national transformation and development, but Nigeria's dysfunctional educational system perpetuates and deepens poverty and underdevelopment and consequently, the resource-rich Nigeria is ashamedly described as a low human development country and as a country with blunted edges in the United Nations Development Programme (UNDP) Human Development Reports and the World Economic Forum Africa and Global Competitiveness Reports, respectively. Relying on secondary data, the paper argues that a human-rights-approach-to-education, investment in quality education, environmental education, research and innovation, achieving the millennium development goals (MDGs) and science and technology are prerequisites for Nigeria's sustainable development and global competitiveness. Essentially, that Nigeria's educational system, policies and practices should be reoriented towards sustainable development, which is a tripod of interdependent and mutually reinforcing pillars of economic growth, human development and environmental conservation, in an equitable and sustainable manner, for present and future generations. The paper submits that all curricula and taxonomies of education, including environmental education are subsumable under ESD which equips individuals and societies with the knowledge, values and skills to live and work in an equitable secure and sustainable manner and balances economic well-being and human development with cultural tradition and respect for and protection of earth's natural resources and environment. To achieve this, the paper among other recommendations, posits a Virtuous Cycle of Education for Sustainable Development (VCESD) Model for Nigeria's national transformation, sustainable development and global competitiveness.
Keywords: Education, Development, Sustainable Development, Education for Sustainable Development, Global Competitiveness

Introduction

Education is a basic objective of development and an importance end in itself. An input and output of development, education is fundamental to the broader notion of expand human capabilities that is the fulcrum of development. At the same time, education plays a key role in the ability of a developing country to absorb modern technology and to develop the capacity for self-sustaining growth and development (Todaro and Smith, 2009:369). In other words, education holds the master key that unlocks a country's potentials towards national transformation, and sustainable human national development.

Development is an eclectic paradigm of social change aimed at improving the condition and quality of life of the people, especially that of the majority of the poor and vulnerable people in the society. For development to be meaningful it has to be sustainable, that is continue for a very long time, without causing damage to the environment, to the benefit of present and future generations. As Jhingan (2007:22) posits, sustainable development means that development should "keep going". It emphasizes the creation of sustainable improvements in the quality of life of all people through increases in real income per capital, improvements in education, health and general quality of life and improvements in quality of natural environmental resources.
At the 1992 United Nations Conference on Environment and Developments (UNCED), or the Earth Summit held in Rio de Janeiro, Brazil, the role of education in promoting sustainable development was made explicit by Agenda 21, the global action plan for the 21st Century (UNCED, 1992):
"Education… should be recognized as a process by which human beings and societies

can reach their fullest potential. Education is critical for promoting sustainable development and improving the capacity of the people to address the environment and development issues"

Agenda 21 was adopted and signed by 178 countries including Nigeria in Rio. Ten years after Rio (or Rio+10), at the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg, the world community came together to review progress and accomplishments of the Earth Summit and to adopt concrete measures and targets for better implementation of Agenda 21, and the more recent Millennium Development Goals (MDGs).

Hence, the developed countries have made huge investments in accessible and quality education in deference to United Nations Educational Scientific and Cultural Organization's (UNESCO) minimum standard of 26 percent annual budget, as their mantra and swansong. It is for this reason coupled with responsible leadership and good governance that the developed countries occupy honorable mention and high rankings in United Nations Development Programme (UNDP), Human Development Index (HDI) and UNESCO's Global Monitoring Report (GMR).

Accordingly, the race by all countries to achieve Education for All (EFA), by 2015 in consonance with the Millennium Development Goals (MDGs) has produced finishers. UNESCO (2008) Global Monitory Report, GMR, says countries in North America, Europe and Asia have breasted the tape. Unfortunately, the GMR named Nigeria among 129 countries lagging behind. Finland, at present, leads in mathematic and in the sciences (UNESCO, 2008)   . Finland's schools are considered the best in the world (Adekeye, 2008:121). The Scandinavian countries including Finland, Norway, Sweden and Demark have consistently topped the scales in terms of investment in education, particularly higher education which they are able to achieve through an effective tax system. Again, in terms of funding of research and development relative to the Gross Domestic Product, GDP, Scandinavian countries are still among the leading European nations (Mordi, 2008:34). This is also true of regional powers like Cuba, Japan and South Korea, and the rapidly developing large "BRIC" countries (Brazil, Russia, India and China) World Economic Forum, World Bank, Africa` Development Bank, 2007).

No nation can develop without a massive investment in the educational system. This is because a country's development is tied to the quality of its human resources, which is the most important and critical factor of production and development. The neglect and under funding of education in Nigeria and the consequent decaying in the public school system have led to a huge disconnect between education theory and practice and an upsurge in the number of private schools, were children of the rich are educated. While the private rich take their children to schools in Europe and America, the vast majority of the poor who attend public schools bear the brunt of the rot in the system. But this is an anomaly since a country is as good as its people. According to Mordi (2008:43) even in a system where the private schools are expected to play a significant role in education, it is necessary for government to set good example for the former to follow by making sure public school are well funded, with conducive learning environment, adequate facilities and an attractive remuneration for the teachers to teach culturally-relevant curriculum that reflects the needs of the country.

To reverse the current trend, it is necessary for the country to have a policy reversal that accord education a pride of place on the list of national priorities for sustainable human and national development. This is more so with Nigeria's ashamedly oxymoronic status as a rich but poor nation and global warming, climate change, global economic meltdown and financial crisis constituting global commons that put a nations development strides in jeopardy if not well managed with strong knowledge – based adaptation and mitigation strategies. Indeed, the 21st century is knowledge – driven and only countries with optimal investment in education can be globally competitive and sustainably developed. As posited by Ekpu (2009:5), one of the most important indicators of a country's readiness for global competitiveness is education, or the lack of it. ESD should not just be a concept, but a philosophy and vision of Nigeria's education.

Conceptual Framework
Education

Education can be conceived as the development of the cognitive, affective and psychomotor domain and abilities of an individual for optimal function and performance in the society. The individual has to be helped to maximize his mental, emotional and psychological abilities which will be beneficial to him and the society in which he belongs. Longman Dictionary of Contemporary English defines education as the process of teaching and learning usually at school, college or university (Longman, 2007:501). Implicit in this are the existence of teaching, learning and training activities meant to impact information, knowledge, skills, and competences for individual and societal improvements and development. Hence, Osuji (2004:5) posits that the essence of education is the harmonious development of the individual's physical, mental, spiritual and social powers, so that he or she is equipped to offer useful service to God and humanity, suffice it to say that "education is the acquisition of knowledge, the aggregate of all processes through which a person develops ability, skills, attitudes

and other forms of behaviour with positive value in the society in which he lives. (Ehiametoler in Okecha, 2008:21). Education is a life long process which frees a man from ignorance and superstition. Education enhances the quality of an individual and enables him to build up his personality in such a way that he is able to play an effective role in the development of the society he belongs (Okecha, 2008:21)

There are three forms of education: formal education, which we receive in schools, non-formal education, obtained from a semi-formal setting such as being an apprentice in a carpentry workshop; and informal education obtained from the streets, church, mosque, farm, market, peer groups, and family. These forms of education are the contributory factors in an individual's overall personality and perception of the world around him. There is no barrier to education. This explains why an old English woman many years ago sat for and passed 'O' level examination at the age of 90. She performed the feat after her son, a physics professor, had retried from a British University (Okecha, 2008:21)

Etymologically, education has two fold definitions. From this dual definitions nature and nurture rear their polemic heads. Two schools of philosophy are involved in this, namely pragmatic or realistic and idealistic schools. One school sees education as coming from the Latin world *educere,* which means to lead out. The school that holds this theory is made up of idealistic like Plato. According to this school, a learner has innate ideas which need to be expanded (Nwubuisi, 2008:5)

The second school of thought believes that education originates from the Latin word *educare,* which stands for "to form". It is the stand of this school that a child's or leaner's mind is *"tabula rasa",* it is the stand of this school that when a child is born, his mind is blank or is like erased slate or board on which to write. It is the sensations that come from external world which put impression on the mind and feed it with information and knowledge (Nwabuisi, 2008:5). This theory has not gone unchallenged. Some scientists maintain that the theory of *tabula rasa* should be rejected sometime before birth the baby's mind becomes in such away that it can receive some information or data (Nwabuisi, 2008:5)

Development

There are many definitions and conceptions of development some absurd, some sublime, as there are cherries in Damascus. We have seen many policy measures including those visibly directed against man and his socio-economic well being described as development   initiatives (Onunwa, 1997:16). As a post world war phenomenon, development was described as economic growth (Mier, 1976:5). That is, as the ability of society to achieve a rapid and sustained rise in the output of all gainful economic ventures. Emphasis was placed on only how society could increase output in its tangible forms. No similar attention was given on how justice is to be achieved in the distribution of what has been produced. The source of technology and skills engaged in production was not also considered (Onunwa, 1997:16-17).

Is the goal merely to achieve national wealth, or is it something more subtle? Improving the   well-being of the majority of the population? Ensuring peoples freedom? Increasing their economic security? The inadequacies in the logic of economic growth led to a paradigm shit.

Recent United Nations documents emphasize "human development" measured by life expectancy, adult literacy, access to all levels of education, as well as peoples' average income, which is necessary condition of their freedom of choice (Soubbotina, 2004:7). In a broader sense, the notion of human development incorporates all aspects of individuals' well-being from their health status to their economic and political freedom. According to the Human Development Report 1996, published by the United Nations Development Programme, "Human Development is the end, economic growth a means" (Soubbotina, 2004:8). Hence, the development of a country is measured with statistical; indices, such as Gross Domestic Product (GDP) or per capital income, literacy rate and life expectancy. These constitute the Human Development Index (HDI) as enunciated in the UNDP Human Development Reports.

It is true that *economic growth,* by increasing a nation's total wealth, also enhances its potential for reducing and solving other social problems. But history offers a number of examples where economic growth was not followed by similar progress in human development. Instead growth was achieved at the cost of greater inequality, higher unemployment, weakened democracy, loss of cultural identity, or over consumption of *natural resources* needed by future generations (Soubotina, 2004:8). As the links between economic growth and social and environmental issues are better understood, experts including economists tend to agree that this kind of growth is inevitably unsustainable – that it cannot continue along the same lines for long (Soubbotina, 2004:8)

Consequently, there was again a paradigm shift from economic growth to human development and now sustainable development which integrates and balances economic, social and environmental issues and concern in the development question. The issues at stake in sustainable development are economic growth, human development, and environmental protection and conservation. In other words, sustainable development is about Economic, Social and Economic Sustainability (ESES). The objective of sustainability requires the protection of the natural resources upon which future development depends. For many advocates of the sustainable development model, valuing nature and non-human life forms in an intrinsic way has also become an integral

part of development (Baker, 2006:5). It seeks to reconcile the ecological, social and economic dimensions of development, now and into the future, and adopt a global perspective in this task. It aims at promoting a form of development that is contained within the ecological carrying capacity of the planet, which is socially just and economically inclusive (Baker, 2006:5)

According to the classical definition given by the United Nations World Commission on Environment and Development in 1987, development is sustainable if it "meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987 in Soubbotina, 2004:9; Baker, 2006:6; Nwosu and Uffoh, 2005; Jhingan, 2007:22iif; and Todaro and Smith, 2009:485). Sustainable development could probably be otherwise called "equitable and balanced" meaning that, in order for development to continue indefinitely, it should balance the interests of different groups of people, within the same generation and among generations, and do so simultaneously in three major interrelated areas – economic, social and environmental (Soubbotina, 2004:9-10).

Sustainable development can also be likened to a pyramid as graphically illustrated below:

Challenges of Nigerian Educational System

The constitution of Nigeria gives all citizens the right to education. But the delivery of education in Nigeria has suffered from years of neglect, compounded by inadequate attention to policy frameworks within the sector. Findings from ongoing educational sector analysis confirm the poor state of education in Nigeria. The national literacy rate is currently 57 percent. Some 49 percent of the teaching force is unqualified. There is acute shortage of infrastructure and facilities at all levels. Access to basic education is inhibited by gender issues and socio-cultural beliefs and practices, among other factors (NPC, 2004:34). Wide disparities persist in educational standards and learning achievements. The system emphasizes theoretical knowledge at the expense of technical, vocational, and entrepreneurial education. School curricula need urgent review to make them relevant and practice oriented (NPC, 2004:34).

Okecha (2009:22) notes that the entire educational system has been bedeviled by a myriad of problems, the situation worsening day by day. These man-made problems include poor funding; shortage of quality staff; dearth of infrastructure; inadequate classrooms and offices for teaching and research; shortage of books and journals; indiscipline; inconsistent and ill-conceived policies; corruption at high and low places; cultism; irregular payments of salaries; examination malpractices; embezzlement of fund; low staff-student ratios; poor record keeping; fraud and self deception with regard to accreditation; infringements of institutional autonomy and freedom and disharmony among unions in appointment of headmasters; or headmistresses, principals, provosts, rectors and vice chancellors; failure to send staff regularly on short courses to improve and enhances their competences; and the fact that government often reneges on the mutual agreements between it and the unions of educational institution.

Similarly, FME (2000) in FGN and UNICEF (2001:156) identified these challenges as: The near absence of a strong philosophical and socio-cultural foundation for education; Societal disaffection with the educational systems; inadequate access at all levels; the extremely depressed state of infrastructure and facilities; lack of relevance, appropriateness and responsiveness in the curriculum; an over-emphasis on rote learning; Endemic strike by students and teachers; persistence of all the educational disparity between different zones of the country; persistence of gender gap in enrolment, participation and achievement; low female enrolment in basic education and body drop-out in certain areas of the country; wide gap between the intention and achievements with the National Policy on Education; problems of organization and management; out-dated examination practices and an examination-led school system; management that leaves a lot to be desired; deficiencies in educational monitoring and evaluation procedures; inadequate funding; lack of reliable statistical data.

Nigeria's Development Profile

Nigeria is a Federal Republic comprising thirty-six (36) states and the federal capital territory (FCT) Abuja. The states form the second tier of government and are further sub-divided into 774 local government areas (LGAs), which constitute the third tier of government. Niger covers land area of 923, 769 square kilometers (909, 890 square kilometers of land and 13, 879 square kilometers of water) (FRN, 2012:8)

With a rich diversity of culture, ethnic group, language and dialects, Nigeria is the most populous country in Africa with 2006 census population of approximately 140 million and projected at 154, 729,000 in 2009 (NPC, 2006; FRN, 2010). An estimated 48 percent of the population is urbanized and 52 percent of Nigeria lives in rural areas. Close to 60 percent of Nigerians work in agriculture and annual population growth rate 2000-2008 was estimated at 3.2 percent (FRN, 2005, 2006, 2010).

With a wide range of favourable climates, vegetation, forest and water resources, Nigeria possess the potential for a wide – ranging agricultural sector, but the bulk of government revenues comes from oil, leaving the agricultural and non oil sectors underdeveloped or untapped. The annual growth rate in Nigeria during the

last decade of the 20th century has been relatively low, averaging 3%. The population has grown appropriately the same rate, suggesting that the welfare of the average Nigerian has not improved significantly (FRN, 2006:9). Despite sustainable reforms over the years, government service delivery is still poor. Analysis of Federal Government Capital expenditure shows that the share of national expenditure allocated to social services especially health and education, has been relatively low. Similarity low capacity to deliver public services impairs access to basic public goods (FRN, 2006:9)

A variety of challenges have militated against Nigeria's quest for sustainable growth and development. These include inadequate human development, inefficient agricultural systems, weak infrastructure; lackluster growth in the manufacturing sector, a poor policy and regulatory environment and mismanagement and misuse of resources (FRN, 2010:8). NPC (2004:7-10) adds that the development challenges facing Nigeria are low per capital income, volatile macroeconomic aggregates, low growth rate, inefficient public sector, high debt rate, high urbanization rate, unlikelihood of meeting the Millennium Development Goals (MDGs), dysfunctional education system and underdeveloped private sector.

In conclusion, despite its oil wealth, Nigeria is one of the world's poorest countries with the largest population of the poor in Africa (FRN 2006: 9). This is attributable to a Resource Curse and Dutch disease, consequent upon bad governance, poor leadership, corruption, a rentier state and dysfunctional education. The table below depicts Nigeria's develop profile.

In table 1 below, it is glaringly uncomfortable that Nigeria is a low human development country, occupying 142nd position out of 171 countries in the HDI 2010 ranking of countries by UNDP using such indices or indicators as life expectancy, literacy rate and GNP per capita. This is largely due to poor investment in human capital which the real wealth of nations and pathways to human development, especially as it concerns education and health.

Measuring Competitiveness

In order to assess national competitiveness, the World Economic Forum (WEF) has developed the Global Competitiveness Index (GCI). Competitiveness is defined as the set of institutions, policies and factors that drive productivity and therefore set the sustainable current and medium levels of economic prosperity (Blanke, 2007:5). In other words, competitiveness is the factors and pillars that drive and sustain economic growth and development in a country when benchmarked with other countries of the world.

The GCI groups the factors that drive national and global competitiveness into nine pillars: These pillars are:
1. Institutions (public and private)
2. Infrastructure
3. The macro economy
4. Health and primary education
5. Higher education and training
6. Market efficiency (goods, labour, financial),
7. Technological readiness
8. Business sophistication; and
9. Innovation (WEF, World Bank and ADB, 2005; Banke 2007:5)

Each of these factors and pillars are critical and must work in synergy to ensure national and global competitiveness. According to Blanke (2007:6), pillars 1-4 constitute basic requirements, pillars 5-7 are efficiency enhancers, and pillars 6 and 9 are the innovation and sophistication factors.

Nigeria's global competitiveness in comparison with other countries in Africa and the world is shown in tables 2 and 3 below:

In table 2, Nigeria's overall global rank is 102 out of 128 countries, a depression of the country's rank of 83 in 2005/2006. It is instructive to note that in the three different groupings and nine pillars of GCI, Nigeria had its worst rankings in health and primary education (119), infrastructure (108), and higher education and training (103). These are educational Infrastructure indicators and outcomes which drive and sustain development and global competitiveness .

In table 3, Nigeria with overall global rank of 102, is worse off compared with other African countries and BRICs (Brazil, Russia, India and China). In particular, Tunisia is the leader in Africa (29), followed by South Africa (46), Mauritius (58), Egypt (65), Morocco (72), Libya (73), and Algeria (76). In the NRICs, India holds the ace (42), followed closely by China (55), Russia (61) and Brazil (67) respectively.

Education for Sustainable Development

In December 2002, the United Nations Generally Assembly adopted resolution 57/254 to put in place a United Nations Decade of Education for Sustainable Development (DESD), spanning the years 2005 to 2014, with the United Nations Educational Scientific and Cultural Organization (UNESCO) as the lead agency for the Decade.

The overall goal of the Decade of Education for Sustainable Development is the integration of the principles, values and practice of sustainable development into all aspects of education and learning. The decades four key objectives are:

1. Facilitating networking and collaborating among stakeholders in Education for Sustainable Development (ESD).
2. Fostering greater quality of teaching and learning in ESD
3. Supporting countries in achieving their Millennium Development Goals (MDGS) through ESD efforts.
4. Providing countries with new opportunities and tools to incorporate EDS in education reform efforts.

The Political Development adopted at the World Summit in Sustainable Development (WSSD, 2002) states that sustainable development is built on three "interdependent and mutually reinforcing pillars" – economic growth, social development and environment protection and sustainability, which must be established at local, national, regional and global levels, ESD is therefore an approach to teaching and learning based on the ideals and principles that underlie sustainability – human rights, poverty reduction, sustainable livelihoods, international understanding, global solidarity, environmental protection, democracy, health, biological and landscape diversity, climate change, gender empowerment and equity, protection of indigenous cultures. The role of Education for Sustainable Development (ESD) is to help people develop the attitudes, skills and knowledge to make informed decisions for the benefit of themselves and others, now and for the future, and to act upon those decisions.

Chapter 36 of Agenda 21, adopted at the 1992 Earth Summit in Rio, identifies four major thrust for Education for Sustainable Development.

1. Promoting and Improvement of Basic Education.
2. Reorienting Existing Education at all levels to Address Sustainable Development.
3. Developing public Understanding and Awareness of Sustainability.
4. Training.

Promoting and improvement of basic education is in tandem with MDG 2 which is achieving universal primary education. Reinventing existing education involves educational reform. This includes more principles, skills, perspective and values that are quantitative, qualitative, appropriate and relevant to the socio-cultural environment and school curricular must include the many complex facets of sustainability.

In public understanding and awareness, ESD requires a population that is aware of the goals of sustainable society. For example, education being essential in public health of efforts to stop the spread of specific diseases such as HIV/AIDS, polio, tuberculosis, cholera and malaria.

Training, which is the fourth principle, presupposes that the world or society needs a literate and environmentally aware citizenry and workforce to help guide nations in implementing their sustainability plans and programmes. All sections including business, industries, higher education, governments, Non-Governmental Organizations (NGOs), and Community – Based Organizations (CBOs), Faith-Based Organizations (FBOs) and other Civil Society Organizations (CSOs) are encouraged to train their leaders and workers in environmental management. Training is distinct from education because it is often specific to particular job or class of jobs.

Formal, non-formal and informal education are involved in ESD. Formal education cannot implement ESD alone. Because ESD is a lifelong process, the formal, non formal and informal education sectors should work together to accomplish ESD goals and objectives.

Education as the foundation of sustainable development was affirmed at the World Summit for Sustainable Development (WSSD). The plan of implementation recognized education as critical for sustainable development in its own rights, but also saw education as a key agent for change and a tool for addressing such questions as gender equality, rural development, health care, HIV/AIDS, production and consumption patterns. The plan also called for synergy among global initiatives in education, specifically mentioning the Dakar Framework for Action on Education for All (EFA); in which literacy, gender issues and quality education play central roles and are essential for sustainable development and the Millennium Development Goals (MDGs) on universal primary education.

Education for Sustainable Development (ESD) is a holistic virtuous cycle of educational enterprise, teaching and learning, which is globally and locally relevant for economic growth, human empowerment and development and environmental protection. ESD mainstreams the principles and values of sustainable development in its policies, curriculum and pedagogy for economic, social and environmental sustainability in an inclusive, equitable, and secure manner.

The Africa region launched the Decade of Education for Sustainable Development (DESD) and its regional strategy of Education for Sustainable Development for Sub-Sahara Africa (SSAESD) at the biennial meeting of the Association for the Development of Education in Africa (ADEA) at Libreville, Gabon, on 27-31 March, 2006 (UNEP, 2010). The Ministerial Statement of Commitment and call for support and action on the SSAESD underline the importance of ensuring that "Africa cultures, knowledge systems, languages, ways of life are integrated into frameworks, programmes and activities developed within the Decade" (UNEP, 2010,

http://www.desd.org/desdcd/africa.html).

The Virtuous Cycle of Education for Sustainable Development (VCESD) Model requires that educational policies, programmes and actions should promote and sustain and have as its measurable deliverables and outcomes, economic growth, human development, environmental protection and sustainability, for the benefit and interest of present and future generations. Any educational enterprise or system that fails to achieve these, ceases to be virtuous, but vicious, deepening poverty and underdevelopment, and impedes sustainable development, and global competitiveness. Adopting the VCESD model presupposes human-rights approach-to-education, quality education at all levels, science and technology, research and innovation, environmental education, indigenous culture and language education, and achieving the MDGs which is a prerequisite for ESD. The VCESD model is the critical path to Nigerians sustainable development and global competitiveness. For education to be a catalyst for national transformation, which is the conference theme, it should be Education for Sustainable Development (ESD), which unfortunately, is the missing link in the conference sub-themes.

Challenges of Education for Sustainable Development (ESD)
In spite of multiple efforts to strengthen ESD, many challenges remain. In particular, there is a need (UNEP, 2011):
- To ingenerate sustainable science and education.
- To strengthen co-ordination and collaboration between different levels of Education for Sustainable Development; and
- To mitigate information and knowledge gaps between different parts of the world.

Also, there is the challenge of mainstreaming all educational policies, taxonomy and programmes towards sustainable development.

Summary, Conclusion and Recommendations
This paper has looked at education and development disconnect in Nigeria and mainstreaming Education for Sustainable Development (ESD) as the 21st century imperative for Nigeria's development and global competitiveness. The paper can be summarized as follows:
- A high positive correlation exists between education and development.
- Nigeria's educational system has many challenges and dysfunctions which have impeded Nigeria's development.
- Education for Sustainable Development (ESD) is the panacea. Sustainable development is mainstreaming economic, social and environment issues and concerns in development agenda, in an inclusive, equitable, qualitative and secure manner. According to the United Nations World Commission on Environment and Development (WCED, 1987), sustainable developments "meeting the needs of the present without comprising the ability of future generation to meet their own needs.
- ESD is the virtuous educational cycle or process of achieving sustainable development – economic growth, human empowerment, social development and environment protection in an inclusive, equitable and secure manner.
- Achieving ESD is an inclusive multi-sector enterprise for formal, non-formal and informal education at different levels and forms of education, the government, Non-Governmental Organizations (NGOs), Faith-Based Organizations (FBOs), the organized private sector, and the regional and international community. Quality education, education as a human right, science and technology, environmental education, indigenous culture and language education are prerequisite for ESD.
- While having a global outlook, ESD should mainstream the local environment in educational policies and programmes. This is the globalization and globalization debate and paradigm.
- The VCESD Model is critical in achieving ESD in Nigeria.

Conclusively, Education for Sustainable Development (ESD) is the 21st century, virtuous holistic education process or cycle and cutting edge imperative for Nigeria's sustainable development and global competitiveness. Accordingly, to achieve ESD in Nigeria, this paper recommends these action points:
1. Sustainable educational reform which will mainstream and effectively implement the principles of ESD at all levels and forms of education in Nigeria with quality, measurable indicators and outcomes.
2. Greater intensity and focus in achieving Millennium Development Goals (MDGs) which have a dialectical relationship with the principles of ESD.
3. Implementing ESD is a long-term process that calls upon all stakeholders, including governments, educational institutions, business and industry, communities, Non-Governmental Organization (NGOs) Faith-Based Organizations (FBOs), mass media, donor agencies, the international communities, and individuals to play a role and embrace the ideals of sustainable development.
4. Creating greater advocacy, awareness and understanding appreciation and implementation of ESD

through training and capacity building, workshop, seminars, conference and the use of traditional and modern (tradomodern) communication media.

5. Sector-wide approach (SWA) or a multi-sectoral approach in ownership, partnership, consultation, collaboration and networks to be adopted.

6. Mainstreaming and promoting education-as-a-human-right, science and technology, research and innovation, information and communication technologies, monitoring and evaluation, indigenous language education, environmental education, cultural diversity, peace and conflict studies in our educational curriculum and national life.

7. Promotion of formal, non-formal and informal education for knowledge, attitudes and skills for poverty alleviation and human development by optimal investment in quality education in line with UNESCO's minimum standard of 26 percent annual budgetary allocation.

8. In collaboration with United Nations Educational, Scientific and Cultural Organization (UNESCO) and United Nations Environmental Programme (UNEP), adopt Nigeria Decade of Education for Sustainable Development (NDESD) Framework for Action. This will involve discussions, clarifications, action plans, and implementation on the multi-sectoral dimension of ESD, as related to environmental, economic, social, cultural and political issues and their implications for education (curriculum development, materials production, teacher training and policy making). NDESD will also involve synergizing with the Millennium Development Goals (MDGs), education for All (EFA), United Nations Literacy Decade (UNLD), Education for HIV and AIDS (EDUCAIDS), African Union Second Decades of Education in Africa (AUSDEA), United Nations Decade for Education for Sustainable Development (UNDESD), African Region Decade of ESD, New Partnership for Africa's Development (NEPAD) Environmental Action Plan and the objectives of the Africa Ministerial Conference on the Environment.

9. Nigeria should spearhead the establishment of West Africa Education for Sustainable Development (ESD) Network as it is obtainable in other sub-regions of Africa. The West Africa ESD Network will be collaboration with National ESD steering committees and stakeholders in member countries of the sub-region. The Network will focus on policy dialogue and strategic planning; vision building; advocacy; pubic awareness; partnership – building; information sharing such as exhibiting ESD best practices and innovations, training and capacity building; resource mobilization research, monitoring and evaluation. The Network will also be a clearing house to compile and share a data base of expertise in the region, facilitate exchanges and cross-border dialogue and linkages to the global ESD learning space.

10. Mainstreaming Development, Environment and Sustainability into all educational levels, especially Nigerian Universities. This will be in consonance with United Nations Environment Programme (UNEP) driven Mainstreaming Environment and Sustainability into Africa Universities (MESA) partnership (UNEP, 2010). This will offer students, staff and university management a broad orientation to Sustainable Development and Education for Sustainable Development (ESD) so that future business and corporate managers, scientists and political leaders will incorporate values and principles of sustainable development in their decision making, raise awareness and spread a new way of thinking about development, economy environment and society, beyond institution boundaries inside the overall urban and rural communities, create opportunities for collaboration projects between universities, civil society, communities and the private sector, enhance quality and policy relevance of university education in Nigeria in the context of sustainable development and the achievement of the MDGs, and contribute to the revitalization of Nigeria's higher education system.

11. Adoption of an entrepreneurial and research-based educational system, especially in the secondary and university education. In the emerging competitive global knowledge economy, nothing short of this could guarantee relevance, sustainability and global competitiveness (Nebo, 2006:15)

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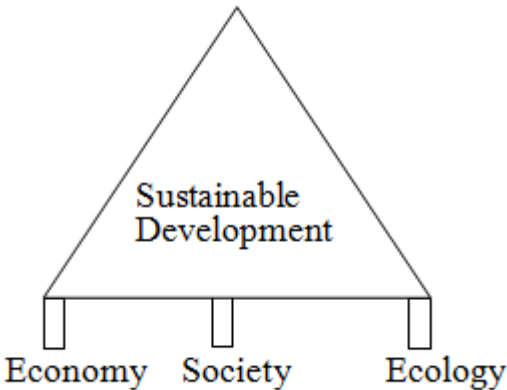
These are the tripod pillars of sustainable development.

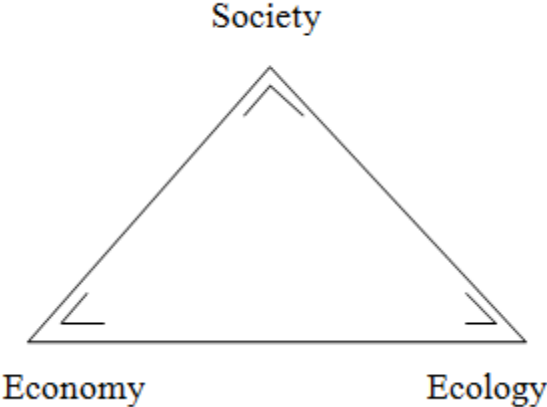**Fig 1: The Tripod Pillars of Sustainable Development**

Fig 2: Pyramid of Sustainable Development

Table 1: Human Development Index(HDI) 2010 Rankings

Very High Human Development		High Human Development		Medium Human Development		Low Human Development	
1	Norway	43	Bahamas	86	Fiji	128	Kenya
2	Australia	44	Lithuania	87	Turkmenistan	129	Bangladesh
3	New Zealand	45	Chile	88	Dominican Republic	130	Ghana
4	United States	46	Argentina	89	China	131	Cameroon
5	Ireland	47	Kuwait	90	El Salvador	132	Myanmar
6	Liechtenstein	48	Latvia	91	Sri Lanka	133	Yemen
7	Netherlands	49	Montenegro	92	Thailand	134	Benin
8	Canada	50	Romania	93	Gabon	135	Madagascar
9	Sweden	51	Croatia	94	Suriname	136	Mauritania
10	Germany	52	Uruguay	95	Occupied Palestinian Territory	137	Papa New Guinea
11	Japan	53	Cuba	96	Bolivia (Plurinational state of)	138	Nepal
12	Korea (Republic of)	54	Palau	97	Paraguay	139	Togo
13	Switzerland	55	Libya	98	Philippines	140	Comoros
14	France	56	Panama	99	Botswana	141	Lesotho
15	Israel	57	Saudi Arabia	100	Moldova (Republicof)	142	Nigeria
16	Finland	58	Mexico	101	Mongolia	143	Uganda
17	Iceland	59	Malaysia	102	Egypt	144	Senegal
18	Belgium	60	Bulgaria	103	Uzbekistan	145	Haiti
19	Denmark	61	Trinidad and Tobago	104	Micronesia (Federated States of)	146	Angola
20	Spain	62	Serbia	105	Guyana	147	Djibouti
21	Hong Kong, China (SAR)	63	Belarus	106	Namibia	148	Tanzania (United Republic of)
22	Greece	64	Costa Rica	107	Honduras	149	Cote d'voire
23	Italy	65	Peru	108	Maldives	150	Zambia
24	Luxembourg	66	Albania	109	Indonesia	151	Gambia
25	Austria	67	Russian Federation	110	Kyrgyzstan	152	Rwanda
26	United Kingdom	68	Kazakhstan	111	South Africa	153	Malawi
27	Singapore	69	Azerbaijan	112	Syrian Arab Republic	154	Sudan
28	Czech Republic	70	Bosnia and Herzegovina	113	Tajikistan	155	Afghanistan
29	Slovenia	71	Ukraine	114	Viet Nam	156	Guinea
30	Andorra	72	Iran (Islamic Republic of)	115	Morocco	157	Ethiopia
31	Slovakia	73	The Former Yugoslav Republic of Macedonia	116	Nicaragua	158	Sierra Leone
32	United Arab Emirates	74	Mauritius	117	Guatemala	159	Central African Republic
33	Malta	75	Brazil	118	Equatorial Guinea	160	Mali
34	Estonia	76	Georgia	119	Cape Verde	161	Burkina Faso
35	Cyprus	77	Venezuela (Bolivarian Republic of)	120	India	162	Liberia
36	Hungary	78	Armenia	121	Timor-Leste	163	Chad
37	Brunei Darussalam	79	Ecuador	122	Swaziland	164	Guinea-Bissau
38	Qatar	80	Belize	123	Lao People's Democratic Republic	165	Mozambique
39	Bahrain	81	Colombia	124	Solomon Islands	166	Burundi
40	Portugal	82	Jamaica	125	Cambodia	167	Niger
41	Poland	83	Tunisia	126	Pakistan	168	Congo (Democratic Republic of the)
42	Barbados	84	Jordan	127	Congo	169	Zimbabwe
		85	Turkey	128	Sao Tome and Principe	170	
		86	Algeria			171	
		87	Tonga				

Source: UNDP (2010). Human Development Report, the Real Wealth of Nations: Pathways to Human Development. (http://hdr.undp.org/en/statistics/)

Table 2: Nigeria Competitiveness Index 2007

	Overall Rank (Out of 128)	Score (1-7)
Global Competitiveness Index 2007……...	**102 ………**	**3.5**
GCR 2005 -06 out of 117 economies ……...	83 ………....	3.7
Basic Requirements ……………………	**113 ………**	**3.6**
1st Pillar: Institutions ………………………	93 ………....	3.5
2nd Pillar: Infrastructure ……………………	108 ……….	2.3
3rd Pillar: Macro economy …………………	57………….	4.6
4th Pillar: Health and Primary Education ….	119 ……….	4.0
Efficiency Enhancers ……………………..	**90………...**	**3.3**
5th Pillar: Higher education and training …..	103………...	3.0
6th Pillar: Market Efficiency ………………	71 …………	4.1
7th Pillar: Technological Readiness ………..	90 …………	2.8
Innovation Enhancers ……………………	**69 ………..**	**3.6**
8th Pillar: Business Sophistication …………	75 …………	3.9
9th Pillar: Innovation ………………………	52………….	3.3

Source: World Economic Forum, the World Bank and African Development Bank (2007), The African Competitiveness Report, p. 166.

Table 3: The Global Competitiveness Index 2007: Nigeria and Comparators

	Overall Index		Basic Requirements		Efficiency Enhancers		Innovation Factors	
Country/Region	**Rank**	**Score**	**Rank**	**Score**	**Rank**	**Score**	**Rank**	**Score**
Algeria	76	3.98	44	4.91	92	3.30	92	3.2
Egypt	65	4.09	64	4.55	75	3.63	65	3.63
Libya	73	4.00	45	4.87	95	3.25	97	3.16
Morocco	72	4.02	70	4.45	77	3.60	73	3.54
Tunisia	29	4.72	33	5.27	40	4.34	28	4.42
North Africa Average	**4.09**		**4.67**		**3.58**		**3.56**	
SUB-SAHARAN AFRICA								
Angola	128	2.50	128	2.48	126	2.51	126	2.52
Benin	107	3.41	106	3.74	107	3.04	90	3.23
Botswana	83	3.83	82	4.30	80	3.54	98	3.15
Burkina Faso	119	3.10	124	3.17	112	2.96	86	3.27
Burundi	127	2.62	127	2.73	127	2.46	121	2.66
Cameroon	111	3.32	108	3.71	117	2.91	104	3.05
Chad	126	2.64	126	2.90	128	2.35	125	2.53
Ethiopia	123	3.00	118	3.31	123	2.69	119	2.72
Gambia	104	3.45	105	3.84	103	3.11	115	2.89
Kenya	97	3.61	109	3.70	83	3.47	59	3.73
Lesotho	115	3.24	107	3.72	122	2.81	123	2.59
Madagascar	113	3.29	114	3.60	116	1.92	91	3.23
Malawi	120	3.09	119	3.30	119	2.87	112	2.93
Mali	122	3.04	123	3.19	121	2.83	96	3.17
Mauritania	118	3.18	117	3.41	113	2.94	108	2.98
Mauritius	58	4.22	50	4.74	62	3.88	47	3.84
Mozambique	124	2.97	122	3.25	124	2.63	118	2.86
Namibia	88	3.76	72	4.44	33	3.29	88	3.25
Nigeria	**102**	**3.49**	**113**	**3.60**	**90**	**3.33**	**69**	**3.60**
South Africa	46	4.42	57	4.66	45	4.24	29	4.35
Tanzania	108	3.40	115	3.56	96	3.17	77	3.49
Uganda	116	3.21	121	3.27	100	3.12	83	3.30
Zambia	117	3.21	116	3.52	109	3.01	127	2.43
Zimbabwe	121	3.07	125	3.09	108	3.03	94	3.18
Sub-Saharan Africa Average	**3.29**		**3.55**		**3.05**		**3.12**	
BRICs								
Brazil	67	4.08	88	4.23	58	3.96	38	4.09
China	55	4.25	47	4.82	72	3.66	57	3.75
India	42	4.47	63	4.56	41	4.33	26	4.60
Russian Federation	61	4.13	68	4.49	59	3.96	72	3.55
Latin America and Caribbean Average	4.25		4.53		4.01		3.90	
Southeast Asia Average	4.25		4.53		4.01		3.90	

Note: All Averages are weighted by population.
Source: World Economic Forum, the World Bank and African Development Bank (2007), The African Competitiveness Report, p.166

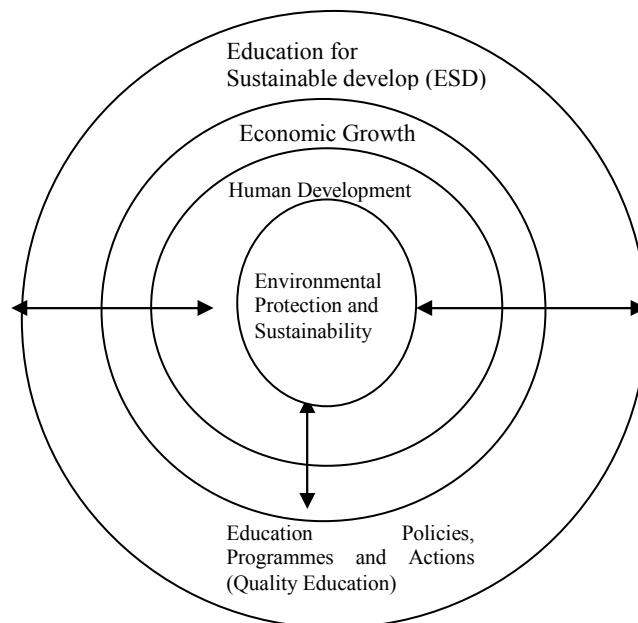**A graphic, integrated, dialectical and virtuous cycle of ESD is illustrated below:**

Fig 3: *A Virtuous Cycle of Education for Sustainable Development (VCESD) Model*

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