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Open, Distance and e-Learning (ODEL): A Panacea for Effective Actualization of Education for Sustainable Development Goal 4 (SDG4)

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ABSTRACT

Globally, higher institutions especially the universities are believed to be the centres for evolving ideas, innovations, research, developmental mechanisms and strategies for positioning nations on the track of technological, social, economic and industrial development. Education is the pivot for implementing Sustainable Development (SD). The concept of sustainable development cannot be realized without a functional and effective higher education system. The wall-to-wall traditional educational mode of delivery seems to be incapable of contributing to its attainment of these global goals; the ODEL mode of education seems to be the tool to reach out to the teeming population dispersed in different locations. Therefore, the focus of this paper is justified by the need to study the contributions of ODeL to the actualization of the five SDG pillars of people, prosperity, planet, peace, and partnership and how ODeL has contributed to the 'Leave no one behind' slogan of the SDG in enhancing human well-being, skills and competencies that empower the learners to use their new skills and knowledge for personal enhancements, community developments and global participation. This study adopted a qualitative study and a literature review in the interpretive research paradigm. Data was collected from secondary sources, arranged into themes, and analyzed for content by looking at issues historically and holistically. The study concludes that the digital transformation in the knowledge economy has positioned open, distance and e-learning to play crucial roles in the mass delivery of knowledge for personal, community, national and global development.

Keywords: Sustainability, Education, Development, Global, Open Distance and e-Learning

1. INTRODUCTION

“Education is a right and not a privilege”. It is well recognized that education as an antidote against ignorance, diseases, injustice and poverty, has no substitute. Education and sustainable development are interwoven because education is the backbone of a nation’s ability to achieve economic and sustainable development targets.

The digital Transformations and Innovations in Open, Distance and e-Learning (ODeL) without any doubt has continued to massively open up access to quality, affordable and flexible education for a large number of people in developing and developed countries who otherwise would not have been considered for access to higher education in the conventional institutions due to varied conditional factors of socio-economic, geography, equity time and other strict guidelines.

The six major elements of global development are to: End poverty in all its ramifications, Zero Hunger across all nations, well-being and healthy living, quality and affordable education, Gender equality and women's empowerment and portable Water and Sanitation. These major elements are hinged on the 5 P's (5 pillars) of sustainable development known as the people, planet, prosperity, partnership, and peace, in line with international monetary fund activities on global development in four distinct areas: Human sustainability, social sustainability, Economic sustainability, Environmental sustainability. The slogan 'Leave no one behind' prompted the UN to adopt the Sustainable Development Goals in 2015 as a global initiative to put an end to poverty, increase prosperity, establish peace and protect the planet by the year 2030 without leaving no one behind

The concept of ESD is to increase global knowledge by encouraging individuals to access competencies, skills, values, creativity and attitudes necessary for a sustainable future by the inclusion of innovative sustainable development ideas such as poverty reduction, climate change issues, disaster control, sustainable well-being and consumption, disease control and prevention, and biodiversity into teaching and learning curriculum. Digital innovation has the potential to support and transform education, and the ability to accelerate the process towards Sustainable Development Goal 4 (SDG 4) by improving the globalization of educational administration. Digital innovation can promote access to educational opportunities and encourages inclusion, delivers quality teaching and learning, chart pathways for lifelong learning, strengthen learning management systems and monitor teaching-learning processes.

Educational transformation can be enriched and complemented by the power of Digital innovation with the potential to accelerate the progress towards Sustainable Development Goal 4 (SDG 4) for education.

This innovation can transform the modes of provision of global access to quality learning, improve education governance and administration, enhance the relevance of learning, and encourage inclusion. During turbulent times, open, distance and e-learning learning can mitigate the effects of education disruption, school dropout and school closures. Sustainable Development Education Panel Report (1998) also opined that to improve the quality of life of the present and future generations, the people must develop the values, knowledge, competence, and skills to become local and global decision-making participants in the individual or collective approach we do things that improve our present well-being and future well-being of the planet.

Therefore, the focus of this paper is justified by the need to look into the contributions of ODeL to the massive education and human capacity development of global citizens.

The quality, affordability, accessibility and equity philosophies of ODeL are motivations for skills and competencies development among workers, entrepreneurs and busy professionals. We can achieve peace, end extreme poverty, control diseases, disaster, war and insecurity, improve well-being, increase productivity, reduce illiteracy and create more inclusive relationships through the ODeL methods of education delivery.

2. STATEMENT OF THE PROBLEM

The world is changing due to crises, population increase and transformations in the global space (north and south). There is a need to secure the present without hampering the future. Education as a tool for the realization of positive change and sustainable development must be accessible, affordable, flexible and equitable for mass participation. This paper focuses on the need to analyse how ODeL as an innovative and technology-driven study delivery alternative can contribute to the actualization of sustainable development for change management, human well-being and empowerment for personal enhancements, community developments and global participation.

3. RESEARCH METHODOLOGY

This qualitative study adopted an interpretive research paradigm approach in the review of relevant literature by looking at issues holistically and historically. Qualitative research involves the why, what or how questions that stress how social experience is created and given meaning” (Denzin & Lincoln, 2003). Data was collected from secondary prints and online sources, arranged into themes, and analyzed for relevant content. This paper addresses specific issues on the potentials of ODeL and how it contributes to the actualization of sustainable global goals

4. CONCEPTUAL FRAMEWORKS

4. 1. The Concept of Education for Sustainable Development

The change management of education in a balanced position in the deployment of all educational resources and adequate investments in education to harmoniously enhance both current and future educational aspirations and needs of the society is referred to as educational sustainability. According to the United Nations Agenda 21 (chapter 36), education will be a major player in the delivery of sustainable development goals. This pronouncement has encouraged the rate of political attention globally towards the integration of education for sustainable development (ESD) into all educational levels (Wals, 2012). Because the ESD is seen as “a process of learning how to make decisions that consider the long-term future of the economy, ecology and equity of all communities”. This facilitated the UN to Pronounce 2005-2014 as a Decade for Education for Sustainable Development (DESD).

Lozano, Lukman, Lozano, Huisingh & Lambrechts (2013) observed that because of the plans to use tertiary education as the avenue for achieving sustainable development, various declarations, treaties, charters, reports, and agreements emerged and consolidated by the

Nagoya Declaration through the UNESCO World Conference on Education for Sustainable Development held in Japan. The declaration called for "an urgent action to further strengthen and scale up education for sustainable development".

Educational institutions of higher learning must work in synergy with society to deliver the expectations from society by being responsive to "society's changing necessities" (Razak, Sanusi, Jegatesen & Khelghat-Doost 2013). These integrated and strategic activities of higher educational institutions to improve the society according to Lozano, et al. (2015) and Lozano (2006) would guarantee sustainability in the society.

Education for sustainable development (ESD) is a conglomerate of many forms and levels of education in existence and others that will come on board in the future. ESD is not focusing on a particular educational programme intervention or project rather it promotes innovations and ideas that reshape the methodology and contents of educational programmes and systems that currently support unsustainable societies. ESD is aimed at the Development of pedagogical skills and professional competencies, the Dissemination of information and knowledge on issues and relationships concerning the socio-economy and environment, the Development of creativity and flexibility that will solve the identified environmental and social problems, the Development of leadership, citizenship and entrepreneurship spirit, Development and application of integrative approaches to educational administration and planning through the creation of curricula combinations around a common principle, Positioning the teacher sustainability educator through self-identity and value development.

The Core Values of ESD include lifelong learning, democracy, equality, peaceful coexistence, and environmental protection. Although educational systems have the potential and responsibility of leading the global orientation towards the actualization of sustainable development, however, experience has shown that rigid acceptance by the formal educational systems is a barrier. To Implement ESD in the School systems, the schools have to be open to this initiative and key into the process of learning and internalization. ESD is in line with the basic fundamental pillars of learning: Learning to live together, learning to know, Learning to be, Learning to do, Learning to transform oneself and learning to transform the society.



Figure 1. The United Nations Sustainable Development Goals 2030.

The seventeen Sustainable Development Goals of the United Nations in line with the 2030 Agenda for Sustainable Development are Global calls for partnership between the Global North and the Global South for peace and prosperity from the present to the future for all people, other life forms and the planet. The Goals focus on improving imbalances in health, economy and education by focusing on tackling climate change and preserving the oceans. The global goal 2030 (SDG 2030) as shown in Figure 1 above include: 1. No Poverty; 2. Zero Hunger; 3. Good Health and Well-Being; 4. Quality Education; 5. Gender Equality; 6. Clean Water and Sanitation; 7. Affordable and Clean Energy; 8. Decent Work and Economic Growth; 9. Industry, Innovation, and Infrastructure; 10. Reduced Inequalities; 11. Sustainable Cities and Communities; 12. Responsible Consumption and Production; 13. Climate Action; 14. Life Below Water; 15. Life on Land; 16. Peace, Justice, and Strong Institutions; 17. Partnership for the Goals.

For these goals to become actualized, there is need for mass education of the global citizens because education is the driving force to liberate and empower the people. It is only through quality education, skills, knowledge, competencies, awareness, strategies and abilities, awareness to actualize these agenda can be actualized. ODeL is the only flexible, affordable and accessible methodology that can be deployed for mass education.

4. 2. The concept of Open, Distance and e-Learning

Open, distance and e-learning are made up of three domains, which are: Open (Accessible to every citizen without discrimination or marginalization), Distance (No distance, location or geographical barrier) and E-learning (Synchronously and asynchronously teaching and learning through the use of ICT and AI)

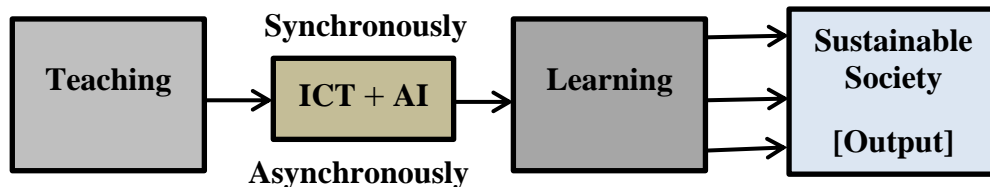


Figure 2. Model of Open, Distance and e-Learning Education for Sustainable Development.
Source: Ayoko (2024)

5. THEORETICAL FRAMEWORK

This paper is guided by the Theory of Interaction and Communication. The theory of distance education was propounded by Borje Holmberg in 1986. This theory falls under the general communication theory and is based on eight background assumptions.

According to Simonson et al. (2006), the assumptions are:

- 1) Distance education gives access to individual learners who do not have the opportunity or cannot attend face-to-face teaching.
- 2) Distance education flexibility promotes independence and freedom of choice for students.
- 3) Open access to Distance education is of benefit to society (locally and globally).

- 4) Distance education promotes lifelong learning, equity and free access to learning opportunities.
- 5) Distance education may inspire metacognitive approaches.
- 6) Distance education is based on individual students centered learning activity.
- 7) Distance education is open to cognitive, behaviourist, constructivist and other modes of learning.
- 8) Interpersonal relations, study interest and empathy between the facilitators and the students are central to effective learning outcomes in distance education.

In conclusion, Simonson et al. (2006) citing Holmberg (1986) affirmed that the communication flow between the teacher and the student is the basic determinant of distance education and that learning is facilitated by “guided conversation”. For the SDG to become actualized there is a need for mass orientation of the global citizens on the need to maintain the present without compromising the future (sustainability) and ODeL is a viable innovation for mass delivery and participation

6. RATIONALES FOR IMPLEMENTATION OF ODeL TO ACTUALIZE SDG-4 IN NIGERIA

- 1) 1). High population of Nigerians (67%) are surviving below the poverty line.
- 2) 2). The traditional face-to-face higher institutions in Nigeria cannot meet up with the demand due to their limited carrying capacity
- 3) 3). Higher percentages of citizens willing to attend higher education are denied access.
- 4) 4). High demand for higher education by working-class adults that want to ‘work and learn’.
- 5) 5). The beliefs (religious and traditional) on the position of women as domestic housewives and early marriages deny a good number of the female population access to higher education in some parts of the country.
- 6) 6). The marginalized population such as people living with disability, prisoners, and physical remoteness of localities from major populations.
- 7) 7). Majority of Nigerians seeking quality education cannot afford the exorbitant tuition fees charged by most privately owned higher institutions (Jegade, 2016)

To achieve sustainable education in line with the global goals in Nigeria, there is a need for a shift and transformation in the delivery of teaching and learning in the educational system to solve the militating challenge of injustice, imbalance, social barriers, marginalization, poverty, and conflict, to achieve human development through the application of ODeL initiatives to implement the education for all (EFA) and Sustainable Development Goals on Education (SDG4)

7. SUSTAINABLE DEVELOPMENT GOAL NUMBER 4 (SDG4)

SDG 4 is aimed at "ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all" by the year 2030. To achieve this, ten (10) different

aspects of education were targeted. The targets are made up of seven (7) expected outcomes and three (3) means of actualizing these targets through the application of the ODeL mode of teaching-learning delivery.

According to Akpan (2015), the potencies of ODeL in actualizing ESG4 include: It opens up education to many global citizens without discriminating against race, location, status, age, qualification, sex, religion, and time; It makes it possible to "work and learn" for the working class or busy professionals; the teaching and learning delivery is flexible and affordably cost-effective; It is a sustainable model for lifelong and continuing education; school drop-outs can easily embrace it as a veritable alternative; married and childbearing women can easily access it irrespective of religious and cultural orientation; it increases equity and reduces education inequalities; It encourages ICT and Artificial Intelligence (AI) competencies and speedy delivery of learning outcome to the learners; and it is a veritable tool for effective delivery of education for all. In addition, ODeL pedagogy is a tool for the administration of education in emergencies.

The roles of ODeL pedagogic mechanism in boosting Global development on education are as documented by Jegede (2016) to include the following features: access and equity for national development; dissolving the barriers to economic empowerment, human resources competencies and rural emancipation; elimination of illiteracy poverty, ignorance and diseases through mass orientation; vocational and technical skills acquisition; life-long learning to knowledge-based society; access to emerging market opportunities at the international space; transformation of education sector respond to changes according to global best practices; solving the problems of teacher education; appreciating the use of information and communication technologies (ICTs) in delivery of teaching and learning; generating digitalization ripple effects on all aspects of the economy. In addition, ODeL drives ESD4 through the following objectives: Provision of wider access to quality, affordable, flexible, and equitable education without any marginalization by providing a platform for promoting a global learning culture

In Nigeria, the Seven Outcome Targets include the following:

- 1) Access to quality early childhood and universal pre-primary education by the year 2030 to ensure all children are ready for primary education
- 2) Free primary education and quality secondary education for all boys and girls by the year 2030.
- 3) To ensure Equal access for all women and men to affordable and quality technical/vocational and higher education is expected by the year 2030.
- 4) Ensure that relevant vocational, technical and entrepreneurial skills and competencies for decent work are achieved by 2030.
- 5) To promote education for all by eliminating gender imbalance and disparity in access to quality education at all levels including marginalized, vulnerable, people living with disabilities and indigenous people.
- 6) To ensure that a high level of literacy and numeracy are achieved by all youth and a good proportion of male and female adults by the year 2030.
- 7) To ensure that the skills, competence and knowledge required for sustainable developments are given to learners through ESD and sustainable lifestyles, well-being, human rights, gender equality, peace promotion, global citizenship and respect for cultural diversity and its contribution to sustainable development.

To implement and achieve these expected outcomes, the following strategies must be considered:

- 1) Provision of non-violent, safe and conducive learning and education facilities that are child-friendly, gender-sensitive and disability-inclusive.
- 2) Provision of scholarship opportunities by the year 2020, for developing and least developed countries, including small island and African countries through the expansion of the number of global scholarships, for access to higher education, including vocational training and science, technology, engineering and mathematics (STEM).
- 3) Adequate professional development and training of more teachers by the year 2030 through international collaborations for massive teacher training in developing countries and most especially in the least developed countries

From the above analysis of the expected outcome and means of implementing the targets, the ODeL mode of education delivery is the most logical pathway to achieve these global goals on education for sustainable development

8. JUSTIFICATION AND CRITICAL RELEVANCE OF ODEL TO GLOBAL GOAL ON EDUCATION

Lobkowitz (1970) cited Aristotle that “the supreme good to which we all aspire is happiness but the happy man is neither a noble nor savage but instead he is an educated man and that all who have meditated on the art of governing mankind have been convinced that the fate of empires depends on the education of youth.” The justification for using the instrumentation of ODeL for the massive delivery of instructional programmes is to facilitate socio-economic development (sustainable development). Jegede (2016) emphasized the role of distance education in human resources development by filling the gap in demand for education by the increasing rural, remote, marginalized, physically challenged and underrepresented population. By "taking the distance out of education", the barriers of cost, distance, time, inequalities, and discrimination are dissolved

According to Rupande (2015), for a country to develop, there must be adequate investment in human resources which are the engine room of the nation and this can be achieved by using ODeL as the vehicle for human capital development. An example is Trinidad and Tobago which became transformed into an exporting industrialized nation from a “plantation economy” by the development of its human capital. Education and sustainable development are interwoven because to achieve economic and sustainability goals, basic education is needed.

Education especially higher education is known to be the linkage between human resources needed for economic development by matching instructional programmes to the needs of industry. Due to digital transformations in the Global North and South, nations that embrace technological innovations can give Work-related learning opportunities to their citizens through the instrument of ODeL.

The potentiality of acquiring education remotely through ODeL methodology can significantly reduce unemployment, self-reliance, social inequality and consequently, reduce poverty and increase wellbeing of the Global citizens. This fits very well into the sustainable development agenda of improving the quality of life. Without any doubt, education is the key

to human development and flourishing. It brings about changes in attitudes, behaviour and values about making informed choices about the present and future life.

9. CONCLUSION AND SUGGESTIONS

UNESCO positioned ESD as target 4.7 in the 2030 agenda for sustainable development in the year 2018. Target 4.7 mentioned ESD that: "By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and culture's contribution to sustainable development". To achieve this target, the ODeL initiative which is open to any number of qualified candidates to access quality education without the barriers of location, time and marginalization, would help in reaching large numbers of students thereby helping as a vehicle in a large measure towards the delivery of the SDGs in education. According to Bradley (2000), "Open and Distance Learning (ODeL) is now one of the most rapidly growing fields of education around the world and has helped to deliver quality and affordable education faster irrespective of geographical location and time".

The issue of continuous demand for education versus the actual supply of educational access has contributed to the growth, acceptance, patronage, and implementation of an ODeL programme in developing countries like Nigeria as an innovation to bridge the gap between the rate of demand and the rate of supply. The digital transformations and the emergence of ODeL delivery through synchronous and asynchronous information and communication technology systems are inevitable advancements in educational development at the global north and the global south.

Following the conclusion of this study, the following suggestions are made:

- 1) Policymakers should widen the scope of ODeL to enable the chances of using it to contribute to sustainable development in developing countries, especially in Nigeria by using it as an innovative mechanism for solving the challenges of affordability, school dropout, location and distance, mobility, gender imbalance, insecurity, and religious belief and marginalization facing the Nigerian educational system
- 2) More educational institutions at all levels should key into the ODeL initiative and governments at all levels, private and corporate organizations should also embrace and invest in ODeL to decrease the negative perceptions and increase the acceptability and quality of ODeL certificates
- 3) The capacity of ODeL to give access to and graduate a large number of students should be maintained to enhance the production of required human resources for the technological and industrialization of national development.

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