

Towards Achieving the Sustainable Development Goals of Education in Nigeria using Open and Distance Learning

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ABSTRACT

The Millennium Development Goals (MDG) were unveiled in year 2000 and Nigeria as a member of the United Nations put the necessary modalities in place towards realizing the goals particularly with respect to quality and affordable education. However, towards the end of 2015, the set goals were not fully realized due to several problems necessitating the UN to come out with another set of goals; the Sustainable Development Goals (SDGs), which also highlighted education as a vital goal to be realized in the year 2030. In this paper, we examine the pitfalls of MDGs with respect to education and suggest how Open and Distance Learning methods via Information and Communications Technology (ICT) can quickly assist vital stakeholders especially, the Nigerian Government in fully realizing the goal of quality and affordable education of SDG in Nigeria. Finally, we highlighted some cogent points that require us to change the image of tertiary education through open and distance learning approach for national development.

Keywords: Quality Education, Open and Distance Learning, affordable learning, MDG in Nigeria, SDGs and Nigeria, ICT and Education.

Reference Format:

Ukaoha, K. C., Abdullahi, M. B. And Nwankwo, W. (2019), Towards Achieving the Sustainable Development Goals of Education in Nigeria using Open and Distance Learning, *Afr. J. MIS*, Vol.1, Issue 2, pp. 19 - 29.

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1. INTRODUCTION

The United Nations (UN) is an umbrella body made up of independent and sovereign nations of the World. Her main aim is to maintain peace and better understanding amongst member countries and to promote sustainable

development. As part of her efforts towards realizing these aim, member countries of the UN in 2005, adopted an eight-point agenda known as the Millennium Development Goals (MDGs), which are to eradicate poverty and ensure better standard of living amongst all member countries. The eight-point agenda or goals are:

- To eradicate extreme poverty and hunger
- To achieve universal primary education
- To promote gender equality and empower women
- To reduce child mortality
- To improve maternal health
- To combat HIV/AIDS, malaria, and other diseases
- To ensure environmental sustainability
- To develop a global partnership for development

These goals resulted from deliberations on how to make significant, measurable improvements to people's lives, with the ultimate objective of reducing poverty throughout the world (Ejeh, 2003). Nigeria as a key member of the UN, adopted the MDG, which had a target of 2015 for realizing all the eight goals. Goal number two of the MDGs seeks to achieve universal primary education. Target was that by 2015, all children, irrespective of sex, could complete a full course of primary schooling through increase in the number of enrolments and ensuring that those enrolled complete their primary education.

As part of efforts towards realizing these objectives, the Nigerian Federal, States and Local Governments collectively started the implementation of the Universal Basic Education (UBE) scheme, which made education at the primary level and the junior secondary school level free and mandatory. Several schools were constructed and renovated while more teachers were employed and trained in order to realize this all-important goal but the implementation of compulsory primary education even though it was never fully done in some states especially those in the Northern part of Nigeria, also diverted concentration away from the implementation of the secondary and post secondary education schemes (Durokifa and Abdul-Wasi, 2016).

The UN observed that as the end of 2015 was approaching, virtually many member countries failed to achieve the full goals of the MDGs with some countries achieving some goals and others trying to do so. In September 2015, the UN member countries expanded the eight goals of the MDGs to include nine more goals, which were renamed as the Sustainable Development Goals (SDGs) with a take-off date of 2018 and a target implementation deadline of 2030. The aim of SDGs number 4 is to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030. Professor Asha Kanwar, President and CEO of the Commonwealth of Learning (COL), says "the

achievement of Goal 4 would be a remarkable success, but will require new and innovative approaches to overcome the many challenges that stand in its way" (Kanwar, 2017). It was observed that one of the most significant challenges to SDG 4 is that the continuing demand for education far outstrips supply.

For the aforementioned reasons, implementing the SDGs 4 would require additional efforts apart from the current system where the numbers of available institutions are not enough to cater for the current number of qualified candidates. The Open and Distance Learning (ODL), which allows any number of qualified candidate to access education from any location and at their own comfort would help assist in providing quality education to large numbers of students thereby helping in a large measure towards the realization of the SDGs in education. The concept of ODL education system focus on open access to education and training to make the learners free from the constraints of time and place, and offering flexible learning opportunities to individuals and groups of learners (Ghosh et. Al., 2012). Open and Distance Learning (ODL) is now one of the most rapidly growing fields of education around the world today and has helped to deliver quality and affordable education faster irrespective of geographical location and time ((Tony) Bates, 1995; Bradley, 2000). In this paper, we examine the present day Nigeria's education system, especially, Tertiary education and then proffer a better method for helping to realize the SDGs for education in Nigeria using the Open and Distance Learning which is purely driven by Information and Communications Technology (ICT).

The rest of this paper is organized as follows. In Section 2 we discuss the related work. Section 3 examines the present day Nigeria's education sector. In Section 4, we highlighted the prospects and challenges of ODL. Section 5 discusses how to achieve SDGs for education through ODL. And lastly, we present concluding remarks in Section 6.

2. RELATED WORK

Oladipo & Julianah (2016) examines the level of commitment by Open and Distance Learning Institutions to the global development goals with emphasis on access to education in Nigeria. They presented documentary evidence relating to the demand and supply of university education as well as the level of enrolment and graduate output in the Distance Learning Institute (DLI), University of Lagos.

It was observed that the level of unsatisfied demand for university education has continued to rise over the past 15 years, reaching its highest value in 2014. Simultaneously, a steady rise in the level of enrolment in DLI was also found with the highest enrolment recorded in 2012. In effect, a significant relationship between the level of enrolment in DLI and that of unsatisfied demand for education was established. Also graduate output was significantly related to students' enrolment in the DLI, University of Lagos.

On the other hand, the long term trend in enrolment was upward in all disciplines with Business Administration and Accounting recording the highest enrolment as opposed to Science Education. The author thus recognises the fact that Open Distance Learning is a giant step towards providing greater access to university education and recommends that more Open Distance Learning centres should be established in Nigeria so as to further broaden the access to university education for all. Finally, more disciplines should be included in the Distance Learning Institute (DLI) University of Lagos programmes.

Ojewumi & Olasupo (2013) reviews the present status of unemployment situation in Nigeria with emphasis on university graduates. Effort was also made to examine the role vocational education through open distance learning can play to address this national problem. Included is recommendation of a vocational training programme developed for graduates seeking employment in areas as Fashion, Interior Decoration, Leather works, Accessories etc. The importance of this ODL based model of vocational education and training programme has great importance and relevance in countries where unemployment is a serious challenge and where there is a great need of providing training to multitude of unemployed youths at different levels to enable them have skills that will afford them the opportunity to contribute their quota to the economic advancement of their country.

Robinson (2008) observes that the goal of 'teacher quality for all' is proving difficult to achieve in many countries, especially in rural areas, yet teacher quality is a key determinant of students' participation rates and achievement levels. It also affects the attainment of social justice in terms of equity in educational quality for students. One contributor to teacher quality is professional development though limits on its availability and quality create inequity for many teachers. This paper described how distance education and ICT improved access, equity, and quality in professional development for rural teachers

in one province in western China, viewed through the lens of a 'rights-based' framework.

Rupande (2015) reviews that Most successful economies in the world are the ones that invest heavily in their human resources and the vehicle for this human capital development is the open and distance learning. Trinidad and Tobago stand out as typical examples of countries which were radically transformed by human capital development from the once "plantation economy" to an exporting industrialised nation. Education and sustainable development are intricately woven, but what is obvious is that basic education is the backbone of a nation's ability to develop and achieve economic and sustainability targets. Higher education principally links workforce development to economic development by matching instructional programmes to the needs of industry. Work related learning opportunities need to be availed so as to drive the economy, and this is the niche that Open and Distance Learning ought to fill in. The advent of knowledge-based economies is giving comparative advantages to nations that thrive more on technical innovations and the competitive use of knowledge than the ones that depend on natural resources or cheap labour. Resource rich countries such as Nigeria still languish in the lower echelons of economic development because of high illiteracy rates, which subsequently lead to high poverty levels among its people. It is the intention of this article to examine how higher and tertiary education and ODL in particular can be used as a driver to socio-economic development as noted by Aristotle, centuries ago; who pointed out that the fate of empires depends on the education of the youth.

Jimoh (2013) observes the inability of qualified candidates to get a space in the conventional universities in Nigeria, calls for a strengthening of Open and Distance Learning programme to take in more prospective undergraduates. Thus, the paper expresses the limitation on the number of spaces in the universities, which imposes restrictions on access to conventional universities as only a ridiculous percentage of those applying for admission succeed in securing placement.

This problem of unfulfilled quest for education versus actual supply of educational services contributed to the acceptance, growth, and implementation of distance education programme in Nigeria as a means to bridge the gap between demand and supply. In essence, the emergence of the system of ODL is an inevitable and unparalleled advancement in the history of educational development locally and internationally. Unfortunately,

ODL is still bedevilled with a number of teething problems which are a clog in the wheel of implementation. It was recommended that the Nigerian government should thus subsidise ODL programmes just like the conventional school system and improve electricity supplies to the nation which helps to power ICT-enabled devices and drive the ODL process effectively.

3. NIGERIA'S EDUCATION SECTOR TODAY

Nigeria today operates the Universal Basic Education (UBE) programme, which is a component of the 9-3-4 education system and involves a mandatory nine years of primary and junior secondary education, three years of senior secondary education and four years of tertiary education. The UBE act was passed into law in 2004 as one of the strategies aimed at helping to achieve the educational component of the MDGs. The scheme provides for free nine years of compulsory primary and junior secondary education in the country and parents are required to ensure that they register their wards in schools and ensure they complete this basic education cycle with appropriate sanctions spelt out in case of default (Obong, 2006).

Education in Nigeria is a shared responsibility of the Nigerian federal, state, local government and private individuals and organizations. Basic education comprises six years of primary school and three years of junior secondary school and this first nine years of basic education is supposed to be free and compulsory. Nevertheless, unfortunately Education in Nigeria is bisected with myriads of problems. These include; poor funding and thus poor educational infrastructures, inadequate classrooms, teaching aids (projectors, Computers, Laboratories and libraries), paucity of quality teachers and poor/polluted learning environment. In addition to these inadequacies, our school system is plagued with numerous social vices such as examination malpractices, cultism, hooliganism and corruption (Odia and Omofomwan, 2007).

In an attempt to avoid the problems, which impeded the realization of the objectives of the past educational programmes, the government outlined implementation guidelines to facilitate successful achievement of the stated objectives (Denga, 2000). The guidelines include:

- Public enlightenment and social mobilization, for full community involvement;
- Data collection and analysis;

- Planning, monitoring, and evaluation;
- Teachers; their recruitment, education, training, retraining, and motivation;
- Infrastructural facilities;
- Enriched curricula;
- Textbooks and instructional materials;
- Improved funding; and,
- Management of the entire process.

On the aggregate, the efficiency of primary education in Nigeria has improved over the years. In 2014, the net attendance rate for primary school was 68.70%, which represents a 3.2% decrease from 71% recorded in 2012. Secondary school net attendance ratio was 57.4% in 2014, recording a minimal increase of 4.7% from 54.80% in 2012. Primary 6 completion rate was about 74% in 2014 which dropped by 15.6% when compared to the 2012 figure. There was also a slight increase in literacy among young women by 0.15% from 2012 to 2014. The survey revealed that the proportion of boys and girls attending primary school declined in 2014, while those attending secondary schools increased minimally. However, primary 6 completion rate recorded a slight decline in 2014 (National Bureau of Statistics- UNDP MDGs performance survey report 2015).

On the other hands, civilization and development are closely connected. Both of them leverage very much on education. Education is a weapon for liberation from ignorance and diseases. Hence, it cannot be isolated from any development agenda as it is the pivot upon which several other programs rotate. Although the emphasis is on achieving primary education, but it has to be realized that to sustain progress towards other goals such as full employment, poverty reduction, health related programs, etc., attention should be extended beyond primary education.

4. OPEN AND DISTANCE LEARNING IN NIGERIA TODAY

The term 'open learning' describes policies and practices that permit entry to learning with as few obstacles as possible. While 'distance education' refers to the separation of the teacher and learner. Because learners and teachers are separated by time and space, technology or media must be used for communication between them. So, Open learning is not the same as distance education but they are clearly complementary, which is why the two terms are used together – and the expression open and distance learning, or ODL (Kanwar, 2017).

Open and distance learning, basically refers to a style of instruction delivery by a non face-to-face approach in which the teacher and the learner are physically separated, and instruction is delivered via various types of media including print and modern ICT.

Open and distance learning is an economical instruction delivery, which does not dependent on time, place, speed and space. It is possible to employ ODL in primary, secondary, tertiary, vocational and non-formal education and flourishes on economies of scale. Its emphasis is solely on quality assurance, well designed instructional packages, and succeeds on extremely well-structured and resourced student support. The aspect of open learning in the ODL relates

to the flexibility of and access to instruction in order to ensure broad availability of educational opportunities to all.

Openness and access pay no attention to age, previous level of academic achievement, and other factors which create artificial barriers to education as a life-long pursuit (Jegade, 2016). Today, the National Open University of Nigeria (NOUN), now with headquarters in Jabi, Abuja, is the only tertiary institution established by the Federal Government of Nigeria to operate Open and Distance Learning mode. It offers undergraduate (Bachelor degree), sub-degree certificate, diploma and Post graduate Diploma (PGD) Masters degree and Doctor of Philosophy (Ph.D.) programmes in various fields of human endeavours. It has a unit called the Regional Training & Research Institute for Distance education and Open Learning (RETRIDOL), which was jointly established by NOUN and the Commonwealth of Learning (COL) in 2003 to identify and meet the needs of ODL-related research and capacity building in the west African sub-region (Jegade, 2016).

The National Teachers Institute (NTI), located in Kaduna, was established and operates the single mode programme for upgrading the qualification of under-qualified teachers as well as the continuing education of teachers using distance learning techniques.

Presently, there are existing and emerging Distance Learning Centres approved by National Universities Commission (NUC) of Nigeria to operate as dual-mode tertiary institutions. Some of them have been accredited while others are in the process of accreditation. The Centres and the universities are as follows:

- 1) Distance Learning Centre, University of Ibadan, Ibadan, Oyo State.
- 2) Centre for Distance Learning, Obafemi Awolowo University, Ile-Ife, Osun State.
- 3) Distance Learning Institute, University of Lagos, Akoka, Lagos State.
- 4) Centre for Distance Learning, Modibbo Adama University of Technology, Yola, Adamawa State.
- 5) Centre for Distance Learning and Continuing Education, University of Abuja, Abuja.
- 6) LAUTECH Distance Learning Centre, Ladoke Akintola University of Technology, Ogbomosho, Oyo State.
- 7) Distance Learning Centre, Ahmadu Bello University Zaria, Kaduna State.
- 8) Centre for Distance Learning, University of Maiduguri, Bama Road, Borno State.
- 9) Lagos State University Open and Distance Learning and Research Institute, Lagos State University, Badagry Express-way, Ojo, Lagos
- 10) Distance Learning Centre, Joseph Ayo Babalola University, Ikeji – Arakeji, Osun State.
- 11) Centre for Human Resource Development & Life-Long Learning, Osun State University, Osogbo, Osun State.
- 12) Babcock Centre for Open Distance & e-Learning, Babcock University, Ilishan – Remo, Ogun State.
- 13) Centre for Open and Distance e-Learning (CODEL), Federal University of Technology, Minna, Gidan Kwano Campus, Niger State.
- 14) Directorate of Distance Learning, Ekiti State University, Ado-Ekiti, Ekiti State.
- 15) Centre for Distance Learning, University of Benin, Benin-City, Edo State.
- 16) Centre for Open and Distance Learning, University of Ilorin, Ilorin, Kwara State.
- 17) Open Distance and e-Learning (ODEL), University of Port Harcourt, Rivers State.
- 18) Centre for Distance and e-Learning, University of Nigeria, Nsukka.

4.1. JUSTIFICATION AND CRITICAL RELEVANCE OF ODL

There are easily perceived long and short term advantages to the government in using open and distance learning mode to complement the traditional methods of education in Nigeria. (Jegade, 2016) in his keynote address at the 3rd University of Ibadan Annual Distance Learning Centre Distinguished Lecture and Stakeholders' Forum Held at the International Conference Centre on 15 July 2015, opined that amongst the many advantages, which the government and the good people of Nigeria stand to

benefit from embracing ODL, can be grouped into the following areas:

- access and equity for comprehensive national development;
- alleviation of capacity constraints for economics, human resources and rural development;
- education for all especially to reduce or totally eliminate illiteracy and poverty;
- capacity building for human resource development especially in areas of acute deficiencies such as vocational and technical education, science and technology;
- life-long and life-wide education in order to build a learning and knowledge-based society;
- access to, and capitalising on, emerging market opportunities both within the African region and globally;
- avenue for transforming our higher education sector to make our institutions respond to contemporary changes, developments and needs of Nigeria;
- providing the answer to the perennial problems of teacher education;
- appreciating, educating the citizens about, and using information and communication technologies (ICTs) to accelerate national and community development and provide an organised entry into the global information superhighway;
- generating spin-off effects on other sectors of national development such as raising development in telecommunications, information technology industry, broadcasting, postal and informatics and the development of many education-related small-scale industries; and
- alleviating budgetary constraints as expenditure on open and distance education has been shown in other countries to be as low as 30 per cent of the total cost of the conventional form of education beyond the take-off costs.

From the foregoing, conclusively, he proclaimed in a concise words that distance education can complement human resource development, and satisfy the exceptionally large demand for education by our huge and rapidly expanding population, which is still mainly rural, remote, underrepresented, and marginalised through resources, location, economic and other reasons. Distance education will enable Nigeria to provide access for all and

achieve equitable representation by 'taking the distance out of education (Jegade, 2016).'

4.2. SOLUTIONS TO ODL CHALLENGES IN NIGERIA

(Jegade, 2016) put forward that for Nigerian government and her supporting population to start enjoying the advantages of ODL to solve national development issues via human resources development, there are many things to be done. These include:

- 1) Expanding existing ODL institutions, establishing new ones, and providing facilities and spaces using reliable statistics of those needing higher education in Nigeria.
- 2) Integrating Distance Learning mode with the traditional face-to-face Education System in order to reduce the institutional resistance to the innovation and to overcome the negative perception of poor quality about distance education.
- 3) Establishing Open Schooling, Open Colleges of Education and Open Polytechnics to enable us develop required middle level human resources for all sectors and at same time to achieve Education for all (EFA).
- 4) Providing a large-scale mass higher education and democratisation of open access to tertiary education as laid down in the National Policy on Education (NPE) and the African Higher Education Summit of 2015.
- 5) Using cutting-edge information and communications technology (ICT), including the internet, massive open online courses and other modalities in ODL that meet accepted quality standards to improve access to Higher Education.
- 6) Designing Course Material with variety of methods that guarantee effective Web-based instruction.
- 7) Effective and Efficient Management of the Dividend of Demography so that every citizen willing and able has unrestricted access to higher education..

4.3 ICT FRAMEWORK FOR ODL IN NIGERIA

ICT is the driving force in Open and Distance Learning and a workable ICT-based framework as proposed by us is given in Fig. 4.1 below. The eTutors, Facilitators and other support staff use the Internet to connect to online resources and courseware and interact with students irrespective of distance and also connect offline to a database of learning resources in form of printed texts, audiovisual resources. The Internet and offline resources can also be used for course administration and research work.

On the other hand, students who are learners can access their learning materials online by connecting via the

Internet where they could also carry out texts and assignments as well as online examinations. Provision is also made for offline access to course materials via the database provided which makes learning materials available in print and audiovisual formats.

The database of offline resources could be maintained in physical stores or libraries and the materials distributed physically to the students and teachers.

The internet connectivity is managed by a webmaster and a database administrator with the resources provided within a Learning Management System or online courseware repository.

5. ACHIEVING THE SUSTAINABLE DEVELOPMENT GOALS IN EDUCATION

The International Community embodied by the United Nations has long recognized education as a vital component for enhancing development and eradicating poverty worldwide and that was why it was made a key component of the defunct MDG and a vital component of the current Sustainable Development Goals (SDGs) (Lane, 2017). The SDG goals are given as follows in Fig. 5.1:

5.1. SUSTAINABLE DEVELOPMENT GOAL NUMBER 4

The aim of SDG 4 is to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” by 2030. The SDG 4 has ten (10) targets encompassing many different aspects of education. There are seven (7) targets, which are expected outcomes and three (3) targets, which are means of achieving these targets.

5.1.1. Seven Outcome Targets. These include the following:

- 1) Universal primary and secondary education is expected by 2030 to ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.
- 2) Early childhood development and universal pre-primary education is expected by 2030 to ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.
- 3) Equal access to technical/vocational and higher education is expected by 2030 to ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.

4) Relevant skills for decent work is expected by 2030 to substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.

5) Gender equality and inclusion is expected by 2030 to eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.

6) Universal youth literacy is expected by 2030 to ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.

7) Education for sustainable development and global citizenship is expected by 2030 to 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 of culture’s contribution to sustainable development

5.1.2. Three means of implementation. These are;

- 1) Provision of Effective learning environments by building and upgrading education facilities that are child, disability and gender sensitive and providing safe, non-violent, inclusive and effective learning environments for all.
 - 2) Provision of Scholarships opportunities by 2020 through substantial expansion globally of the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programs, in developed countries and other developing countries
 - 3) Training of more Teachers and educators by 2030 through substantial increase in the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States
- From foregoing targets, the most logical pathway to achieve these SDG 4 targets is by embracing open and distance learning mode because of the following reasons.
- 1). Thus, majority of citizens willing and able to attend higher education remain denied.
 - 2) There is growing demands of working adults for higher education. Majority of them could not complete their studies or education before joining workforce due to some reasons beyond their control.

- 3) The total carrying capacity of all face-to-face institutions of higher learning in Nigeria could not admit vast majority of Nigerian citizens thirsty and qualified for higher education.
- 4) In some parts of Nigeria, religious belief and early marriage denies a good number of female population from higher education.
- 5) Factors like physical disabilities, physical remoteness of localities from major population, and
- 6) Payment of exorbitant tuition fees in most privately owned Universities drives away vast majority of Nigerian citizens thirsty and qualified for higher education.

Therefore, there is a need to change the image of tertiary education in Nigeria to solve challenges of social dislocation, poverty, conflict, and marginalisation, as well as achievement of the human development goals especially with regards to Education for All (EFA).

6. CONCLUSION

Intuitively, the key to any human development and progress is education as it helps to enhance growth and development. Presently, the Nigerian educational system, especially, tertiary education lacks the capability to successfully find lasting solutions to educational problems in the country due to the unavailability of admission slots for every prospective undergraduate.

Development of our nation depends on tertiary education and if we are to enhance the effective training of manpower and citizens at all levels in order to achieve the SDG goals on education, then Open and Distance Learning which utilizes ICT for its operation and delivery, needs to be massively invested upon as it would enhance a wider spread of tertiary education at affordable costs. More institutions should key into this initiative and the governments at all levels, should also be involved in developing useful policies and standards that would help increase the acceptability and quality of ODL certificates.

ACKNOWLEDGEMENT

The authors will like to appreciate the reviewers/editors for useful comments and inputs which have improved the quality of the paper.

REFERENCES

- [1] Ejieh, M. U. C. (2003), "Characteristics and concerns of recruits into primary teacher education program in Nigeria", *The Alberta Journal of Education*, Vol. 44(4), pp.380–382.
- [2] Durokifa A. A. and Abdul-Wasi, B. M. (2016), "Evaluating Nigeria's Achievement of the Millennium Development Goals (MGDs): Determinants, Deliverables, and Shortfalls", *Africa's Public Service Delivery & Performance Review*, pp.656–683.
- [3] Kanwar, A. (2017), "Open and Distance Learning for Sustainable Development", *Ministers Reference Book, Commonwealth 2017*, pp.145–150.
- [4] Ghosh, S., Nath, J., Agarwal, S., and Nath, A. (2012), "Open and Distance Learning (ODL) Education System: Past, Present and Future – A Systematic Study of an Alternative Education System", *Journal of Global Research in Computer Science*, Vol. 3(4), pp.53–57.
- [5] (Tony) Bates, A. W. (1995), "Technology, e-learning, and distance education," Routledge, Taylor & Francis Group, London.
- [6] Bradley, J. (2000), "Basic Education at a Distance: World Review of Distance Education and Open Learning (World Review of Distance Education and Open Learning, Vol. 2)", C. Yates (Eds), Routledge Falmer Studies in Higher Education.
- [7] Oladipo, A. J. (2016), "Open Distance Learning: Pathway to Sustainable Development of Higher Education in Nigeria", *Open Online and Flexible Learning: The Key Sustainable Development (Pan-Commonwealth Forum 8 (PCF8), [172]*, Malaysia, November 2016.
- [8] Ojewumi, A. K. and Olasupo, M. O. (2013), "Unemployment Challenge in Nigeria: Vocational Education through Open & Distance Learning Model to the Rescue", *Conference Proceedings & Working Papers in Pan-Commonwealth Forum 7 (PCF7)*, [269].
- [9] Robinson, B. (2008) "Using distance education and ICT to improve access, equity and the quality in rural teachers' professional development in western China", *International Review of Research in Open and Distance Learning*, Vol. 9, No. 1., February.
- [10] Rupande, G. (2015), "Open and Distance Learning: The Cornerstone of Economic Transformation", *International Journal of Humanities Social Sciences and Education*, (IJHSSE), (Online), Vol. 2, Issue 1, pp.279–285, January.
- [11] Jimoh, M. (2013), "An Appraisal of the Open and Distance Learning Programme in Nigeria", *Journal of Education and Practice*(Online), Vol.4, No.3.
- [12] Obong, J. I. (2006), "The State of Basic Education in Nigeria: The Way Forward", Paper presented at the

Annual Conference of Science Teachers Association of Nigeria, Calabar.

[13] Odia L. O. and Omofomwan, S. I. (2007), "Educational System in Nigeria: Problems and Prospects", *Journal of Social Sciences*, Vol. 14(1): pp.81–86.

[14] Denga, D. I. (2000), "Evolving a new education culture: The universal basic education focus", *International Journal of Research in Basic and Life-Long Education*, Vol. 1, pp.1–6.

[15] Jegede, O. (2016), "Open and Distance Learning Practices in Nigerian Higher Institutions of Learning", *Invited Keynote Address at the 3rd University of Ibadan Annual Distance Learning Centre Distinguished Lecture and Stakeholders' Forum, International Conference Centre, University of Ibadan*, Thursday, 14th & Friday, 15 July, 2016.

[16] Lane, A. (2017), "Open Education and the Sustainable Development Goals: Making Change Happen", *Journal of Learning for Development*, Vol. 4(3), pp.275–286.

[17]. "United Nations General Assembly Draft outcome document of the United Nations summit for the adoption of the post-2015 development agenda". UN. Retrieved 15

February 2019. From
https://www.un.org/ga/search/view_doc.asp?symbol=A/69/L.85&Lang=E

[18] *National Bureau of Statistics - UNDP MDGs performance survey report 2015*; www.ng.undp.org/content/nigeria/en/home/library/mdg/NigeriaMDGsSurveyReport2015.html

[19] www.news.un.org

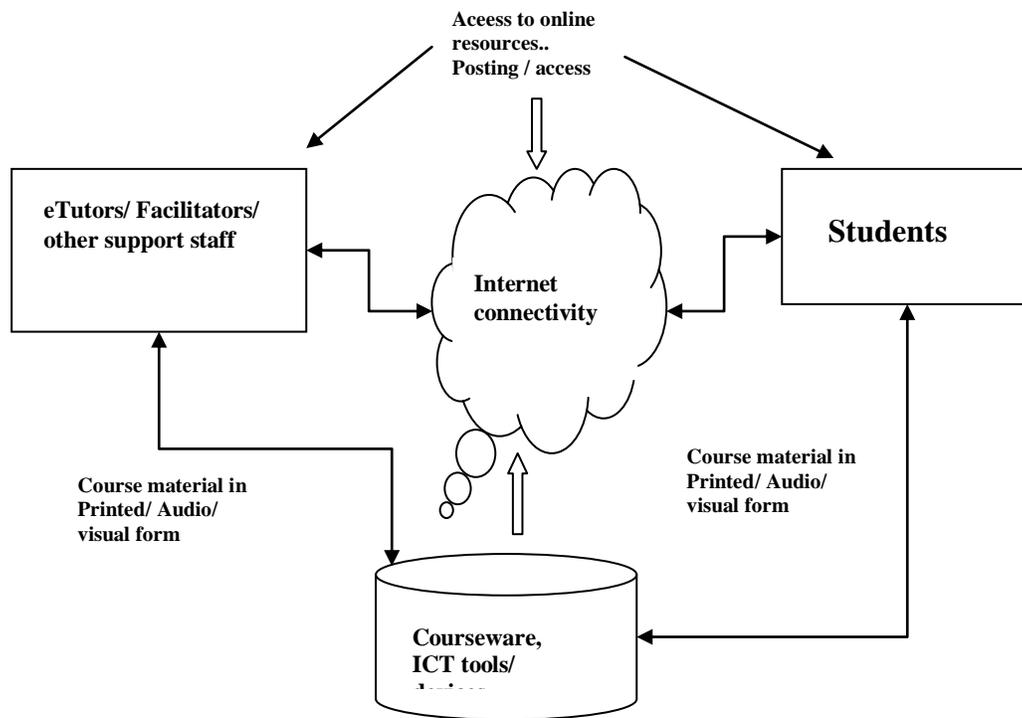


Fig. 4.1: ICT Connectivity model to support Distance Learning in Nigeria.



Fig. 5.1: The UN Sustainable Development Goals. (www.news.un.org)