

Impact of Open and Distance Learning on the Educational Development of In-service Teachers for Sustainable Development

MOJISOLA OLUFUNKE OSIKOMAIYA
National Open University of Nigeria

Abstract. Education is the key to human capacity development and progress. It's a tool that promotes technological development, for expanding education to all and sundry, and towards achievement of MDSs, the role of open and distance education in training of teachers in order to meet the require manpower is paramount. Open and Distance Learning (ODL) is a significant medium for the realisation of SDGs in Nigeria. Teachers' professionalism deserves a major transformation if the nation is sincere and determined to achieve the SDGs by examining various opportunities offered through modern technology. This study adopted a descriptive survey research design to examine the impact of ODL on the training of in-service teachers for sustainable development, a step towards making education accessible, affordable and lifelong. Four research questions were raised and one hypothesis was generated. A structured questionnaire consisting of 24 items in 4 sections was used for data collection. A sample of 245 participants was randomly selected from Lagos and Awa Study centres. The instrument was developed and validated by the experts in ODL and evaluation with a reliability index of 0.77 using Cronbach Alpha technique. Data were analysed using mean ratings and regression analysis. Findings revealed that online distance learning has a great impact on the training of the in-service teachers and that ODL ($\beta = .1.734$; $t = 13.512$; $p < .05$) is a potent contributor to educational development of in-service teachers. The study recommended that SDGs Goal 4 can be achieved with adequate provision of training through ODL to in-service teachers.

Keywords: Open and Distance Learning, Educational development, In-service teachers, Sustainable Development Goals (SDGs), Human capacity development, Teachers' Professionalism,

Education, Distance education, teachers' training, Lifelong learning

1. Introduction

Intergovernmental efforts in September 2015 agreed to set the world on a path towards sustainable development by the adoption of the 2030 Agenda for Sustainable Development. This agenda set out quantitative objectives across the social, economic, and environmental dimensions of sustainable development. The 17 Sustainable Development Goals (SDGs) form a cohesive and integrated package of global aspirations the world commits to achieve by 2030. Building on the accomplishments of their predecessors the Millennium Development Goals (MDGs), the SDGs address the most pressing global challenges of our time, calling upon collaborative partnerships across and between countries to balance the three dimensions of sustainable development-economic growth, environmental sustainability, and social inclusion (Matte, Moyer, Kanuri, Petretta, Bulger, and Swaney, 2015). Goal 4 of SDGs is set to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. It is on this premise that provision of education to all and sundry rests. For a nation to achieve goal 4 of SDGs, there is a need to strengthen the school education by providing opportunities to teachers for improving their professional capabilities/capacities because no country's education can rise above the quality of the teachers. The development of a country can be determined by whether its citizens have good education or not. The better the quality of education that a country has, the faster it is likely to develop (Johan and Harlan, 2014). As a result, teachers see the need to develop themselves in order to keep abreast with trends and innovations, they want to

develop themselves without losing their jobs, this prompted majority of them to go for in-service training through ODL institutions.

Education is a key factor for sustainable development and bedrock of a nation's development. It is a tool that promotes technological development of a nation. Education is seen as a purposive, conscious or unconscious, psychological, sociological, scientific and philosophical process, which brings about the development of the individual to the fullest extent and also the maximum development of society in such a way that both enjoy maximum happiness and prosperity. Education is of great importance to all nations... (Omolewa, 2001). It is a veritable tool to catalyse socio-economic development of any nation. Education is one of the most powerful weapons which can be used to change the nation, a nation cannot develop unless her citizens are well educated. Education is one of the essential instrument for achieving sustainable growth and development in any nations. This is why United Nations Educational Scientific and Cultural Organisation (UNESCO) places education on her priority being the foundation on which peace and sustainable development rest on. UNESCO (2014) defines sustainable education as that which empowers learners to take informed decisions and responsible actions for environmental integrity, economic viability and a just society, for the present and future generations while respecting cultural diversity. ODL is recognised as a distinct sector of education to be organised nationwide and given individuals flexibility in the development of the human resources towards national development (Jedege, 2016).

In-service education can simply be defined as the relevant courses and activities in which serving teachers may participate to upgrade their professional knowledge, skills, and competence in the teaching profession. The potentials and importance of education necessitates in-service teachers desire to learn through Open and Distance Learning. Distance education has become popular in Nigeria and it is seen officially as a reliable, better option of furthering ones education among in-service teachers and adults generally. Demand for qualified teachers has been high and will continue to be so as countries around the world work to ensure that all their citizens can access education through to high school level as a minimum, and beyond – a highly desirable goal (UNESCO 2007). In Nigeria, a wealth of open and distance-delivered teacher education programmes exists, using a variety of approaches. The drive force to make educational development imperative was the driving force behind distance-delivered teacher

education in Nigeria. Simpson and Kehrwald (2010) observed that recent years have seen teacher education becoming a more credential led profession. Teaching has become a profession that requires a degree. This trend to formal credentialing is sure to continue along with the need for the lifelong learning associated with participation in knowledge societies. This resulted into is formal continuing professional development programmes for teachers as the need for career-long professional development is recognised more and more. Alabi and Ige (2014) highlighted the rationale for in-service education of teachers as follows:

- pre-ponderance of unqualified teachers in the educational system
- improvement of the curriculum
- unsatisfied admission demands
- issue of unemployment
- poor performance of students in examinations
- degrading quality of teaching
- education gap between the southern and northern parts of Nigeria

Continuing education can be regarded as the entire body of educational processes whatever the content level and method, whether formal or otherwise, whether they prolong or replace initial education in schools, colleges and universities as well as in apprenticeship, whereby persons regarded as adults by the society to which they belong develop their abilities, enrich their knowledge, improve their technical or professional qualifications or turn them in a new direction and bring about changes in their attitudes or behaviour in the two fold perspective of full personal development and participation on balance and independent social, economic and cultural development

1.1 Open and Distance Learning

The idea of Open and Distance Learning (ODL) was first introduced into the educational system in Nigeria in 1983 and was resuscitated in 2002 with the awakening of the vision that informed the initial establishment of the university. Its creation was borne out of the need of people to learn at their comfort zone and outside the confines of conventional school system. It was envisioned to admit and satisfy the education and skill needs of Nigerians no matter their status, age and circumstances. It is correspondence courses that metamorphosed into distanced education. ODL varies distinctively in its approach of study, it is a type of education where learners are separated by distance and learners learn at their conveniences. It operates a

fluid system that allows working class, e.g. teachers, civil servants to upgrade and learn or get certificated on the job. Creed (2001) defined distance education as an educational process in which a significant proportion of the teaching is conducted by someone located away from the learners.

Ajadi, Salawu and Adeoye (2008) said distance education is a system of education characterized by physical separation between the teacher and the learner, in which instruction is delivered through a variety of media. Jegede (2016) defined open and distance learning as a form of instruction by a mode other than the face-to-face method, where there is physical separation between the teacher and the learner, and instruction takes place through a variety of media including print and modern ICT. Yusuf (2006) defined distance education as a student-centeredness of education which deals with the use of print and electrical technologies to present individual lesson to learners at a distance.

The International Council for Open and Distance Education defined open and distance education as any form of learning in which the process enables individual learners to exercise choice over any one or more of a number of aspect of learning with an educational process in which a significant proportion of the teaching is conducted by someone removed in space and or time from the learners (NOUN, 2017). The role of ODL in the training of teachers needed for the success of SDGs is very germane and enormous.

1.2 Statement of the Problem

The teacher is regarded as the main source that determines quality in education. The Federal Republic of Nigeria, in realization of the importance of education to national development, agreed that the quality of any educational system depends largely on the quality of its teachers. Teachers need to go for further studies in order to improve themselves which invariably will affect their output (students). The worrisome figures reported by United Nations agencies worldwide and especially the Sub-Saharan Africa region had the lowest percentages of trained teachers in pre-primary (48 per cent), primary (64 per cent) and secondary (50 per cent) education levels call for concern. The Goal 4 of SDGs goes beyond school enrolment; it looks at proficiency levels, the availability of trained teachers and adequate school facilities, and disparities in educational outcomes. It aims at achieving the goal of universal primary and secondary education, affordable vocational training, access to higher education and more. As a result,

there is need for teachers to go for in-service training and re-training in order to achieve SDGs. Based on the above, the study, therefore, sought to examine the impact of ODL on the educational development of in-service teachers for sustainable development in Nigeria.

1.3 Significance of the Study

The study is significant in the sense that it would assist teachers to discover that they are key players in achieving SDGs, Goals 4. Teachers need to equip themselves with core skills, trends and innovations in order to achieve academic excellence. It would sensitize and help teachers to see that they need to go for further training in order to keep abreast with teaching professionalism and they can achieve this through ODL. The study would assist the teacher to re-discover that they are bigwig in the teaching and in attaining SDGs Goal 4, as results they need to go for training, re-training and upgrade their academic qualifications.

1.4 Purpose of the Study

The purposes of the study are to:

- Examine the impact that ODL has on the training of in-service teachers.
- Establish the contributions of ODL on the training of in-service teachers.
- Determine relevance of ODL to the training of in-service teachers.
- Examine the challenges facing ODL in the development of in-service teachers.

1.5 Research Questions

The following questions were raised:

- What impact does ODL has on the training of in-service teachers?
- What are the contributions of ODL on the training of in-service teachers?
- What is the relevance of ODL to the training of in-service teachers?
- What are the challenges facing ODL in the development of in-service teachers?

1.6 Hypothesis

One hypothesis was generated for the study:

H₀: There is no significance relative impact of ODL on the educational development of in-service teachers towards sustainable development

2. Methodology

This study adopted the descriptive survey research design. The study consisted of two hundred and fifty (250) participants sampled across Lagos and Awa Study Centres in Lagos and Ogun States. Purposive sampling technique was used based on the pre-determined criterion, that only those who are practicing teachers will be participants of the study. However, only two hundred and forty five (245) of them completely filled and returned their questionnaires. Four research questions were raised and one hypothesis was generated and tested. The instrument for data collection was a 24-item, multiple response questionnaire developed by the researcher validated by lectures at Faculty of Education, National Open University of Nigeria, Abuja and Olabisi Onabanjo University, Ago-Iwoye, Ogun State, which the respondents filled and returned. The questionnaire had two sections (demographic and questions) dealing respectively on impact of ODL on the training of in-service teachers. The candidates were requested to indicate their extent of agreement or disagreement with some identified statements about their experiences with ODL and their educational development. Section A contained demographic information while Section B contained a 24 items divided into four sub-section with response options of Strongly Agree (SA) which is

assigned 4-points; Agree (A) which is assigned 3-points, Disagree (D) which is assigned 2-points and Strongly Disagree (SD) which is assigned 1-point. The instrument had a reliability index of 0.77 established using the Cronbach alpha formula. The value obtained was considered high enough and hence reliable and adequate for the study. Data collected through structured and validated questionnaire were analysed using descriptive statistics (simple percentages, means and standard deviation). A cut-off point of 2.50 was adopted for decision making. This implies that items with mean values of 2.50 and above were accepted while those with mean values less than 2.50 were rejected. The hypothesis is analysed through quantitative analysis (regression analysis) at 0.05 level i.e. 95% confidence limit.

3. Results

Data Presentation and Interpretation

This section presents the qualitative and quantitative analysis showing the impact of Open Distant Learning (ODL) on the educational development of in-service teachers for sustainable development. The analysis was structured in line with each research questions and hypothesis so as to make a valid conclusion based on the findings.

Analysis of Demographic Information

Table 1: Distribution of Respondents by Demographic Information

Variables	Parameters	Frequency (f)	Percentage (%)
<i>Gender</i>	Male	94	38.4
	Female	151	61.6
<i>Teaching Experience</i>	Below 5 years	58	23.7
	5-10 years	80	32.7
	11-15 years	58	23.7
	Above 15 years	49	20.0
<i>Age Group</i>	Below 25 years	37	15.1
	26-30 years	56	22.9
	31-35 years	55	22.4
	36-40 years	58	23.7
	Above 40 years	39	15.9
<i>Highest Qualification</i>	NCE	148	60.4
	HND/B.Sc/B.A.	70	28.6
	M.A/M.Sc	27	11.0

The table above presents the distribution of respondents by demographic information of respondents. According to the result of the analysis, 94(38.4%) of the respondents were male while 151(61.6%) were female. This indicated that majority of the sample audience were female gender. Also, in terms of teaching experience, 58(23.7%) each had below 5 years of teaching experience and 5-10 years of teaching experience had 80(32.7%), 11-15years of teaching experience had 58 (23.7%) while 49(20%) had above 15 years of teaching experience. By implications, majority of the respondents had between 5-10 years of teaching experience.

Moreover, based on age group, 37(15.1%) were below 25 years of age, 56(22.9%) were between 26-30 years of age, 55(22.4%) were between 31-35 years of age and 58(23.7%) were between 36-40 years of age while 39(15.9%) were above 40 years of age. This can be deduced that majority of the respondents were between 26-40 years of age. Consequently, 148(60.4%) of the respondents had NCE as their highest qualification and 70(28.6%) had HND/B.A. while 27(11.0%) has Master’s Degree and equivalent. By implication, it can be deduced that since majority had the least minimum requirement that qualified them as a teachers, they need open distance learning in their respective discipline towards sustainable educational development.

Research Questions One: What impact does ODL has on the training of in-service teachers?

Table 2: Impact of Open Distance Learning on the Training of In-service Teachers

S/N	Items	SD(%)	D(%)	A(%)	SA(%)	Mean	SD
1	Flexibility of Open and Distance Learning (ODL) encourages me to further my studies while working as a teacher.	NIL	NIL	29.4	70.6	3.71	0.46
2	Educational sustainability can be achieved through ODL in training of teachers.	NIL	1.2	53.1	45.7	3.44	0.52
3	ODL allows me to go for higher studies for professional development in teaching.	NIL	2.4	49.8	47.8	3.45	0.55
4	ODL allows me to study at my own pace	2.9	6.5	48.6	42.0	3.30	0.72
5	ODL has helped me to develop skills such as time management, research, written communication, leadership experience and using varieties of technology in learning.	NIL	3.7	50.6	45.7	3.42	0.56
6	ODL programmes / institutions (NOUN, NTI) are recognized by government.	1.2	1.6	33.5	63.7	3.60	0.59
Grand Mean = 3.49		Criteria mean =2.50					

Table 2 presents the descriptive statistics showing the impact of open distance learning on the training of in-service teachers. The result above indicated that a grand mean values (3.49) is greater than the criterion mean (2.50). Therefore, online distance learning has a great impact on the training of the in-service teachers. This implied that teachers who want to further their education without losing their jobs have the opportunity to do so through ODL programmes.

Research Questions Two: What are the contributions of ODL on the training of in-service teachers?

Table 3: Contributions of ODL on the Training of In- Service Teachers

S/N	Items	SD(%)	D(%)	A(%)	SA(%)	Mean	SD
7	ODL made it possible to change my study centre as a result of transfer by my employer or spouse	1.2	9.8	44.5	44.5	3.32	0.70
8	ODL will assist the nation to achieve Sustainable Development Goals in education.	NIL	3.7	45.	50.6	3.47	0.57
9	ODL encourages computer literacy skills and enable learners to be aware of their potentials.	NIL	1.2	47.8	51.0	3.50	0.55
10	ODL allows attendance in class at my suitability	2.4	26.5	37.6	33.5	3.02	0.84
11	ODL provides good chances to learn using new technologies	1.2	7.3	60.0	31.4	3.22	0.63
12	ODL is cheap, accessible and affordable	2.4	18.8	55.1	23.7	3.00	0.72
13	ODL offers an excellent ways to maximize employee skills and talents without losing valuable working hours	NIL	9.8	53.5	36.7	3.27	0.63
14	ODL allows in-service teachers with families growth without losing valuable income and family bond	2.4	18.4	51.8	27.3	3.04	0.75
Grand Mean = 3.21		Criteria mean =2.50					

Table 3 shows the participants’ perception on the contributions of ODL on the training of in-service teachers. The Grand mean of 3.21 which greater than 2.50 criterion mean indicates that participants agreed that ODL has significantly contributed to the training of in-service teachers in Nigeria.

Research Questions Three: What is the relevance of ODL to the training of in-service teachers?

Table 4: Relevance of ODL to the training of in-service teachers

S/N	Items	SD(%)	D(%)	A(%)	SA(%)	Mean	SD
15	ODL is an avenue for both slow and fast learners (in-service) teachers to learn and improve themselves.	NIL	10.2	43.3	46.5	3.36	0.66
16	Conventional institutions is better and educational sound than ODL Institutions	1.2	23.7	48.6	26.5	3.00	0.74
17	ODL offers short courses, full length degree and other distance qualifications which make it easier to advance my teaching career.	1.2	6.1	59.9	33.1	3.24	0.62
18	Various technologies and social networking assisted my online learning	NIL	2.4	62.4	35.1	3.23	0.52
19	I prefer ODL institutions than conventional institutions because ODL encourages me to learn at my own pace.	2.4	14.3	56.7	26.5	3.07	0.71
Grand Mean = 3.19		Criteria mean =2.50					

Table 4 shows the relevance of ODL to the training of in-service teachers. A grand mean of 3.19 which is above the criterion mean of 2.50 was obtained, this indicates that respondents agreed that in-service training has improved the way teachers prepare their lesson notes and control classroom activities; in-service training has given teachers the opportunity to learn different trends and innovations in teaching-learning situation. The opportunity of working and learning through ODL Programme has improved in-service teachers' knowledge of the educational process.

Research Questions Four: What are the challenges facing ODL in the development of in-service teachers?

Table 5: Challenges facing ODL in the Development of In-Service Teachers

S/N	Items	SD(%)	D(%)	A(%)	SA(%)	Mean	SD
20	ODL programmes are sub-standard.	16.3	23.3	38.8	21.6	2.66	0.99
21	Through ODL I have developed self-disciplined and self motivated life style	2.4	2.9	61.6	33.1	3.25	0.63
22	ODL involves some complicated technology which is difficult for me to operate	7.3	29.8	45.3	17.6	2.73	0.84
23	Various technologies and social networking assisted my online learning	16.7	38.8	32.2	12.2	2.40	0.91
24	I prefer ODL institutions than conventional institutions because ODL encourages me to learn at my own pace.	1.6	21.2	55.5	21.6	2.97	0.70
Grand Mean = 3.21		Criteria mean =2.50					

Table 5 shows the challenges facing ODL in the development of in-service teachers. Based on the criteria mean of 2.50 and the calculated means of 3.21, it was discovered that the use of complicated technology which is difficult to operate, pedagogical skills of online lectures and lack of computer system to enhance online programmes were identified and perceived as challenges facing ODL in the development of in-service teachers. Nevertheless, the information provided above indicates that there are challenges facing ODL in the development of in-service teachers.

Research Hypothesis: There is no significant relative impact of ODL on the educational development of in-service teachers towards sustainable development

Table 6: Relative Impact of Open and Distance Learning (ODL) to the Prediction of Educational Development of the In-service Teachers

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	37.916	4.036		9.394	.000
ODL	1.734	.128	.655	13.512	.0000

R = .655^a; R² = .429; p < .05, F = 182.569

a. Dependent Variable: Educational Development

Results in Table 6 also indicated that open and distance learning ($\beta = 1.734$; $t = 13.512$; $p < .05$) has potent impact on the educational development of in-service teachers towards sustainable development. This indicated that in order to enhance educational development of in-service teachers towards sustainable development, open and distance learning is an important variable that needed to be considered. Also with the goodness of fit of about 43%, ($R = .655^a$; $R^2 = .429$; $F_{(1,244)} = 182.569$; $p < .05$), it is concluded that the model above have a high forecasting power.

4. Discussion

Research question one revealed that online distance learning has a great impact on the training of the in-service teachers. Ajani (2018) noted that every teacher should be allowed to access various in-service professional development activities regularly for sustainability of professional development. Also Junaid and Maka (2015) asserted that alternative training may take the form of full- or- part time study at a college or university for upgrading teachers' qualifications. Provision of in-service training is what NOUN set out to achieve through ODL medium. Quality of teachers can be improved upon through on-line courses for teacher for sustainable development.

Research question two revealed that ODL significantly has contributed to the training of in-service teachers in Nigeria. Amadi (2013) was of the opinion that teachers' education is an important area where distance education has been used extensively to provide pre-service teachers preparation, upgrading of academic qualifications and in-service teachers continuing professional development and content areas and instructional methods. She said further that distance education plays an increasingly important role in helping to address shortage of teachers.

Research question three discovered that ODL is highly relevance in the development of in-service teachers. Amaka (2013) discovered that ODL has been used to reach new constituencies of potential teachers who would not otherwise have become 'professional' teachers.

Research question four discovered that the use of complicated technology which is difficult to operate was identified as one of the challenges facing ODL in the development of in-service teachers. Musingafi, Mapuranga, Chiwanza and Zebron (2015) identified various challenges facing ODL in the development of in-service teachers, these are lack of sufficient time to study, problem related to the access and use of ICT, lack of support from employers, others are delayed in feedback, delayed or lack of study material. Apart from the above, Ndayambaje, Bimenyimana, and Ndahayo, (2013) also identified failure of using ICT modern technologies, limited resources such as library access and textbooks, poor record and learner support systems, inadequate number of staff and used facilities, and drop out as well as failure on behalf of the students (in-service teachers) as problems facing ODL. Also, insufficient knowledge and use of information communication technology (ICT) was

one of the challenges facing ODL in Nigeria (Ogunyinka, Okeke and Adedoyin, 2015).

Result from the hypothesis revealed that open and distance learning is a potent contributor to educational development of the in-service teachers towards sustainable development of the nation. Okebukola (2014) opined that new breed of quality ODL trained will produce better quality basic and post-basic graduates. According to him, literacy rates will rise and ills associated with the present high level of illiteracy including religious intolerance and poverty, will diminish. Also, in-service training as perceived by teachers enhances teachers' productivity to a great extent. The finding of this study is in agreement with the finding of Eze (2015), who investigated the impact of training and retraining on teachers' productivity in Enugu State and found that training and re-training enhanced teachers' productivity to a great extent.

5. Conclusion

The findings of this study have some implications for the Nigerian education system in order to attaining Goal 4 of the SDGs. The nation cannot afford to remain behind in this global trend, therefore, importance of teachers quality in achieving SDGs cannot be downplayed (Akinwalere,2017). Also, in order for Nigeria to rise above poverty level, literacy needs to be seen as a tool for the achievement of SDGs Goal 4 (Bitrus, 2017), this can be achieved when teachers' quality is enhanced. One of the means of obtaining this; is through ODL programmes. Teachers' qualities are assessed through their credentials, knowledge and experience, mastery of content / coursework, Teachers Registration Council of Nigeria (TRCN) and regular continued learning as well as in-service training which the teachers bring to classroom to improve teaching-learning process. There is no doubt that for teachers' efficient classroom management, appropriate teaching methods and to keep abreast with trends and innovation in the teaching-learning situation, teachers need to go for further training. They can achieve this without the fear of losing their jobs, it only ODL that permit teachers to learn on the job.

6. Recommendations

Based on the conclusion, it is recommended that:

- Teachers should see the desirability to develop and equip themselves through

various in-service professional development programmes offered in ODL institutions.

- Teachers need to go for regular training and re-training in order to improve their qualities.
- A policy should be put in place to allow teachers to go for training and re-training through ODL in order to keep abreast of trends and innovations in teaching-learning situations.
- ODL institutions should be adequately funded to overcome several challenges contending with distance education.

References

- Alabi, F. O. and Ige, A. M. (2014). Issues in in-service education provision for teachers in Nigeria. The way forward in this decade and beyond. *International Journal of Humanities, Social Sciences and Education (IJHSSE)*, 1(12), 126-132.
- Ajadi, T.O., Salawu, I. O. & Adeoye, F. A. (2008). E-Learning and Distance Education in Nigeria. *The Turkish online Journal of Education Technology*, 7(4), 22-29.
- Ajani A.A. (2018). Needs for in-service professional development of teachers to improve students' academic performance in sub Saharan Africa. *Arts and Social Sciences Journal ASSJ*, 9(2), 1-7.
- Akinwalere I. (2017). Teacher Quality as essential variable for Functional Literacy and Sustainable Development. *Journal of Teachers of English and Communication Skills. ELTT*, 13, 125-138.
- Amadi, M. (2013). In service training and professional development of teachers in Nigeria: Through Open Distance Education. *Pre-service and In-service Teacher Training and Learning and Teaching Styles*. 173-180.
- Bitrus K. C. (2017). Communication Technology for literacy: A strategy for achieving Sustainable Development Goals. *Journal of Teachers of English and Communication Skills, ELTT*, 13, 195-206.
- Creed, C. (2001). The use of Distance education for teachers. Cambridge: Defining and sustaining useful results: *Education Technology*, 41(3), 19-26.
- Eduwen F. O. (2016). In-Service Education of Teachers: Overview, Problems and the Way Forward. *Journal of Education and Practice*, www.iiste.org, 7(26).
- Eze, T. (2015). Teachers' Perception of the impact of training and retraining on teachers productivity in Enugu State, Nigeria. *Quest Journal of Research in Business and Management*, 4(3), 33-37.
- Jedege, O. (2016). Open and distance learning practices in Nigerian higher institutions of learning. A keynote address at the 3rd University of Ibadan Annual Distance Learning Centre Distinguished Lecture and Stakeholders Forum Held at International Conference Centre, University of Ibadan, Thursday 14th and Friday 15th, July, 2016.
- Johan, R. & Harlan, J. (2014). Education nowadays. *International Journal of Educational Science and Research (IJESR)*, 4(5), 51-56.
- Junaid, I. M. and Maka, F. (2015). In-service Teacher Education in Sub-Saharan Africa: A synthesis reports, *The Commonwealth, Commonwealth Publishers*
- Matte, S., Moyer, L., Kanuri, C., Petretta, D., Bulger, C., & Swaney, R. (2015). Getting Started with the Sustainable Development Goals. A Guide for Stakeholders. Columbia University's School of International and Public Affairs.
- Musingafi, M., Mapuranga, B., Chiwanza, K. and Zebron, S., (2015) Challenges for Open and Distance Learning (ODL) Students: Experiences from students of Zimbabwe Open University. *Journal of Education and Practice*, 6(18), 59-66. www.iiste.org
- Ndayambaje, I, Bimenyimana, T, and Ndahayo, V. (2013) A study on the practice and challenges of DTP under Kigali Institute of Education (KIE). *Rwandan Journal of Education*, 1(2), 69-76. <https://www.ajol.info>
- Ogunyinka, E., Okeke, T., & Adedoyin, R. (2015). Teacher Education and Development in Nigeria: An analysis of reforms, challenges and prospects. *Educational Journal*, 4(3), 111- 122
- Okebukola, P. (2014) Open and Distance Education: A catalyst for production of quality teachers and the transformation of Nigeria. *A paper presented at the 4th National Teachers Summit, National Teachers Institute, Kaduna*, Non13-14. <https://www.academia.edu>
- Omolewa, M.A. (2001). The Challenges of Education in Nigeria. Ibadan: UPL
- Simpson, M. & Kehrwald, B. (2010). Educational principles and policies framing teacher education through open and distance

- learning. In *Teacher Education through Open and Distance Learning*.
- Patrick Alan Danaher and Abdurrahman Umar, (Eds). Canada, Common Wealth: Perspectives on Distance Education. 23-34.
- The Sustainable Development Goals Report (2019). United Nations New York <http://www.copyright.com> New York, United States of America. Email: publications@un.org;
- NOUNwebsite: www.noun.edu.ngfile:///C:/Users/DR/Desktop/NOUN%20DETAILS NationalOpenUniversityofNigeria203.htm NOUN (2017).
- UNESCO (2007). Teacher Education Policy Forum for sub-saharan Africa UNESCO. Retrieved May 202009, from: <http://unesdoc.unesco.org/image/0016/001627/162798e.pdf>
- UNESCO (2014). Education for Sustainable Development. <https://en.unesco.org>
- USjournal of Academics: Advantages of Distance Learning. Retrieved 7th Oct, 2018.
- Woodbridge, M. (2015). From MDGs to SDGs: What are the Sustainable Development Goals? ICLEI briefing sheet. Kaiser-Friedrich-Straße 7, 53113 Bonn, Germany Email: urban.research@iclei.org, www.iclei.org/publications.
- Yusuf, M.O. (2006). Problems and Prospects of Open and Distance Education in Nigeria. *Turkish Online Journal of Distance Education - TOJDE* January, 17 (1), ARTICLE 2, 22-29.