

## Open Educational Resources (OERs) in National Open University of Nigeria Case Study of Southwest Centres

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### ABSTRACT

The study looked at the extent to which Open Educational Resources (OERs) are provided in NOUN study centres in Lagos, Ogun and Oyo states. A sample of 1,157 students, being 15.0% of all 300 level Education students were randomly selected from the seven (7) centres in the three states. A validated instrument using Cronbach alpha with reliability index of 0.85 was used to collect data on the extent to which listed OERs are provided in the centres. The data collected were analysed using descriptive statistics and multiple regression. The study revealed that NOUN has not fully exploited OERs at its disposal to give access to university education to its teeming population. It is suggested that NOUN should make adequate use of OERs for content delivery, while the students too should be encouraged to make use of the social network for educational enhancement.

Keywords: Open Educational Resources, NOUN, Content delivery, Access

### Introduction

Education is germane to the development of any nation in that it is tied to different facets of economic activities. The number of people that have access to quality education enhances such development, hence the importance of education for sound political and economic development is not in doubt. Consequently, it is necessary for the country to develop its human resources so that there can be all-round development. The issue of access to university education has been a challenge in Nigeria for many decades. This may be due to the fact that the Ashby Commission which was the first Nigerian Commission set up on Higher Education in 1959 to investigate and recommend to the government among others, on the needs for higher education in Nigeria did not realize the extent of the hunger for higher education in Nigeria. The commission recommended four universities and projected an enrolment of 7,500 by 1970 and 10,000 by 1980, but by the middle of 1970s, according to Isuku and Emunemu (2012), Nigeria had thirteen universities and by 1999, some of the universities were admitting 16,000 and 30,000 students so all the universities were having 400,000 students by 1999. The enrolment rate did not decrease in the subsequent decades. The Joint Admissions and Matriculation Board (JAMB)'s statistics (2020) revealed that between 2000-2016 sessions, the number of the conventional universities in Nigeria rose from 46 to 139, the number of the applicants also

increased tremendously, same for the number of qualified candidates but the percentage of those who gained admissions kept fluctuating, there was no year that 100 percent of the candidates who scored the required >180 marks gained admission. The highest percentage admitted was in 2014/2015 when there were 130 conventional universities. Even in 2015/2016 when there were 139 universities, less than 40% of the qualified candidates gained admission probably because most universities increased the cut off mark at post JAMB examination to fence entrance to their institutions having considered the available space and facilities in the universities. The situation is still the same though there are more than 139 conventional universities in Nigeria presently (JAMB, 2020). JAMB complained that even though the National University Commission (NUC) prescribes the number of students to be admitted into the federal universities, having taken cognizance of the available facilities at various faculties, some universities do not comply with the carrying capacity for they admit below the admission quota. However, Idogho (2012), asserted that some universities admit above their carrying capacities, even then, many qualified candidates are left unattended to. This is even though education plays an important role in the wellbeing of a nation. The realization of the Millennium Development Goals (MDG) as well as Education for All (EFA) by 2030 may be impossible if necessary steps are not taken to stop the trend.

Access to university education means free and unlimited, unhindered, unfettered opportunity to university education. It includes access, enrolment, attendance and completion of university education (Okede, 2009). High demand for higher education led to the generation of various modes of education including Open and Distance Learning (ODL). According to Jegede (2010), ODL appears to have the potential to increase access to higher education. ODL may prove to be a financially viable method of educating Nigeria's enormous and expanding rural and urban populations (Bassey, 2010). ODL offers flexibility and open access to teaching in order to guarantee that everyone has access to a wide range of educational possibilities. As lifelong interests in a democratic society, openness has no respect for age, previous academic achievement level, or other variables creating artificial barriers. It is a cost-effective system of instruction, independent of time, location, place, or space, claims Jegede (2013). Various learning contexts, including primary, secondary, postsecondary, vocational, and non-formal education, employ it. ODL has developed from print to the web. Taylor (2001) divided ODL into six (6) generations based on the methods of delivery. The correspondence model is the first generation, followed by the multi-media model, which is the second generation. The third generation is the tele-learning model, the fourth generation is flexible learning, and the fifth generation is intelligent flexible learning. Technology's adaptability and pervasiveness, along with creativity and invention, gave rise to the open resources concept, which Jegede (2013) refers to as the sixth generation. OERs and Mass Open Online Courses (MOOCs) are its defining features. ICT, or information and communication technology, is playing a key supporting role in a number of ODL services. The phrase "Open Educational Resources" (OERs) was coined at the inaugural Global OER event, which UNESCO convened in 2002. OERs are crucial to open distant learning.

OERs are resources for teaching, learning, and research that are either in the public domain or have been made available under an intellectual property license that enables others to use them

freely and repeatedly. (Hewlett Foundation, 2004). According to the Commonwealth of Learning (2004), these resources are freely and publicly available for use in teaching, learning, development, and research. They are any educational resources (such as course materials, textbooks, curricula, maps, streaming videos, multimedia applications, podcasts, radio, television, and any other content created for use in teaching, learning, assessing, as well as research purposes) that are freely accessible to educators and students without the requirement that they also pay license fees or royalties. Any educational resource with a license that allows for re-use and adaptation without additional fees is an OER. MOOCs, which are brief courses offered for free online, are comparable to OERs. Making higher education more accessible is the goal.

The OER unit was created by NOUN in 2014. The academic brief for NOUN defines OER as any educational resource that is freely accessible to educators and students without the requirement of paying license fees or royalties. This includes course materials, textbooks, curriculum, maps, streaming videos, multimedia applications, podcasts, radio, and television. NOUN acknowledges that OER has become a concept with significant potential to help changes in education. While the concept of utilising resources as an essential technique of communicating the curriculum in education is where its educational value rests. The ability for these resources to be shared online when they are digitized is what gives resource-based learning (RBL) its revolutionary power. The license is the only significant distinction between an OER and any other educational material, which is important.

One of the ten objectives NOUN sets for establishing OER unit is to stimulate activities geared towards conversion of NOUN course materials to OERs, the remaining nine are on collaboration with international organisations, conducting workshops on OERs, stimulating policy on OERs, helping to design MOOCs and others. Nothing is said about the use of OERs to ease inconvenience and hassles of content delivery or giving students access to education wherever they are based, though the university

promised to bring education to students' doorsteps. The blueprint of NOUN stated that NOUN is collaborating with NTA, it also has a radio station, it is necessary to know the extent to which the electronic media are being used to provide access to education via intensive use of ICT. All the ICT modes are within the jurisdiction of OER, thus it is expedient to know how far the OERs are being used to achieve the purpose for which the OER unit was established, hence the study analysed the extent to which OER modes are being utilized for content delivery in NOUN using the Southwest centres as a case study.

### Research Questions

#### Four research questions guided the study

1. To what extent does NOUN provide open educational resources?
2. To what extent are the course contents uploaded on the internet?
3. What is the extent of the availability, functionality and adequacy of learning facilities provided by NOUN in the Southwest Nigeria?
- 4a. To what extent would the seven variables: (employment status of students, availability of learning resources, functionality of learning resources, adequacy of learning resources, access to open educational resources, level of facilitators' online interaction and level of students' on line interaction) predict NOUN graduates' job performance?
- 4b. What are the relative contributions of these variables to the prediction?

### Objective of the study

The study seeks to know the extent to which OERs are at the disposal of NOUN students and how they are used to enhance learning in the study centres in the southwest Nigeria.

### Methodology

The study adopted a survey design of ex-post facto type. Simple random sampling technique was used to select Lagos, Ogun and Oyo states. All the seven study centres in the three states were selected. From each centre, 15.0% of all the 300 level education students were selected, giving a total of 1,157 students. Five instruments were designed for data collection.

NOUN Educational Facilities and Resources Checklist (NEFRC) provided information on availability, functionality and adequacy of educational facilities and resources in NOUN study centres. Some of the facilities are: physical structures like auditoria, tutorial rooms, computer laboratories, science laboratories, course materials in print/electrical facilities, audio-visual materials and so on. The researcher ticked each item sighted, counted (where applicable and later compared with the population of students in class.) to determine the adequacy. The researcher indicated on the checklist that the facilities and resources sighted are functioning or not. The instrument was given to experts in ODL in faculty of education and educational evaluation, University of Ibadan, for face and content validity. NOUN Students' Questionnaire (NSQ) elicited responses from students on whether they have access to internet facilities, awareness of the iLearn platform, the social media angle they use, competence in using social media for educational purpose, information dissemination and online interaction with facilitators. The instrument listed the statements that were rated by the students on a 4 point scale of Very Great Extent (VGE), Great Extent (GE), Little Extent (LE), No Extent (NE). The response format was scored as follows: VGE=4, GE= 3, LE=2, NE=1.

The level of online facilitation was measured with Noun Facilitators' Questionnaire (NFQ) to elicit responses from facilitator on the extent of his exposure to OERs, online interaction with the students, online facilitation, regularity and punctuality on learning management system, communication channels used to facilitate at a distance among others. The instrument was given to experts in ODL in the faculty of education and educational evaluation experts for content and face validity after which corrections were effected. The instrument was trial tested using a sample of 20 facilitators in NOUN Study centres in Delta state. Cronbach Alpha was used to analyse the data to determine the internal consistency and the reliability coefficient was 0.89. NOUN graduates' job performance was measured by comparing their performance with conventional university graduates on the job. Graduates' Principals' Questionnaire (GPQ) as well as Graduates' Teaching Quality

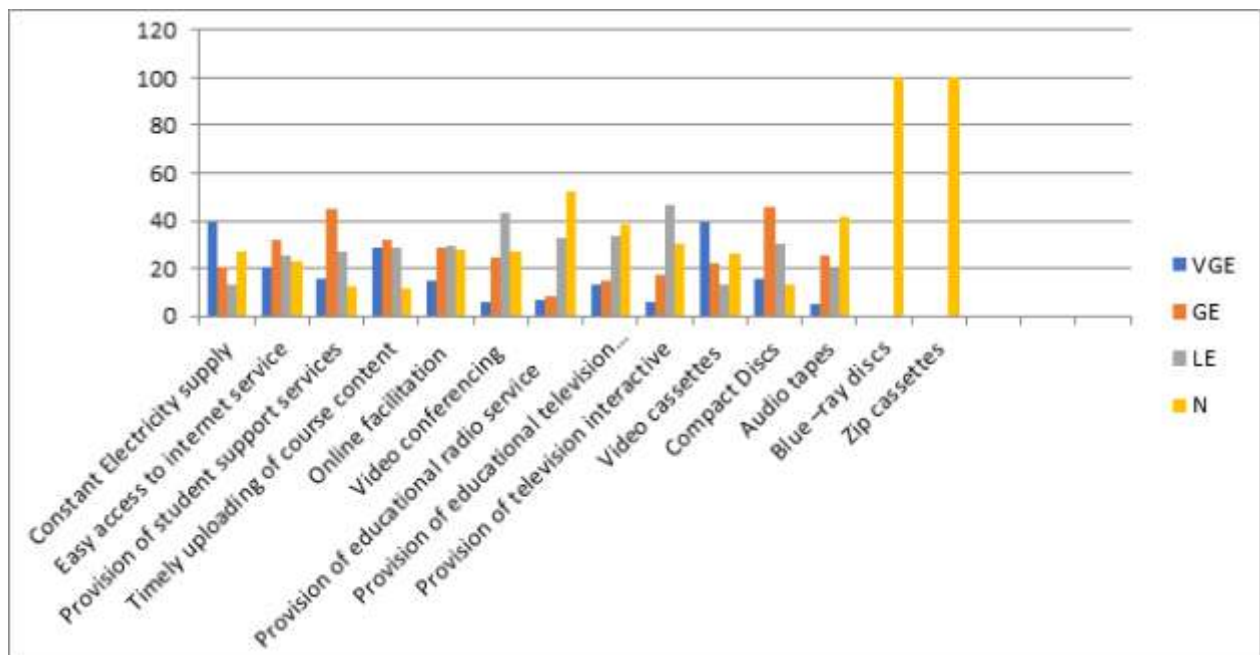
Observation Scale (GTQOS) were designed for this. GPQ elicited information on the quality of NOUN graduates compared to their counterparts who graduated from the conventional universities. The instrument was trial tested using 30 employers of NOUN graduates in Delta state. Cronbach Alpha was used to analyse the data to determine the internal consistency and the reliability coefficient was 0.87. The instrument was coded thus, 4= To a very large extent, 3= To a large extent, 2= To some extent, 1= No extent.

GTQOS was adapted from Isiugho-Abanihe (2009). It consisted of two sections. Section A consisted of items dealing with data such as name of school, school type, teacher's qualification. A box to tick if the teacher being observed is a graduate of NOUN or conventional university gender, age,

qualification and subject taught, topic, name of observer date of observation. Section A had 14 items. Section B had to do with behaviour categories that were observed which are: preparation, introduction, presentation, communication skills, method of delivery and classroom management. It had 47 items. GTQOS was subjected to face and content validity by experts in observation instrument construction and development. Inter-rater reliability was established using Scot Pie formula and the reliability coefficient was 0.85.

**Research Question 1:** To what extent does NOUN provide Open Educational Resources for its students?

In answering this question, the views of NOUN students were sought, the frequency counts and percentages are shown in Figure 1.1.



**Fig. 1.1: Percentage Distribution of Open Educational Resources provided for students by NOUN**

Figure 1.1 shows the frequency and percentage count of NOUN education students' responses to the extent to which OERs are provided by the institution. The figure shows that 457 (39.5%) of the respondents indicated that to a very great extent, there is constant electricity supply in the study centres while 237 (20.5%) indicated that the electricity supply is constant to a great extent 155 (13.4%) indicated that the electricity supply

is constant to a little extent and 308 (26.6%) claimed that the electricity supply is not constant. On whether there is easy access to internet service or not 233(20.1%) indicated that to a very great extent, there is access to the internet service, 367 (31.7%) claimed that there is access to internet service to a great extent, 293(25.3%) indicated that there is access to the internet service to a little extent while only 264(22.9%) indicated that there is no access to internet service in the centres. As regards provision of students' support services only

181(15.6%) indicated that there was provision of students support services to a very great extent, 524 respondents indicated that students support services were provided to a great extent, 310(26.8) said the provision of students' support services was to a little extent while 142 (12.3%) claimed there was no provision of students' support services. As of timely uploading of course content on the internet, 329(28.4%) claimed that course content is timely uploaded to a very great extent to a great extent, 328 (28.3%) said the course content is timely uploaded to a little extent and 131(11.3%) indicated that the course content is not timely uploaded. On the issue of e- facilitation 168(14.5%) of the respondents indicated that there is e- facilitation to a very great extent, 327 (28.3%) said there is e- facilitation to a great extent, 324(29.9) claimed there is e- facilitation to a little extent while, 321(26.6%) said there is no e- facilitation As to whether video conferencing takes place or not, only 68 (5.9%) indicated that there was video conferencing to a very great extent, 285(24.6%) video conferencing takes place to a great extent, 496(42.9%) there is video conferencing to a little extent, 308(26.6%) claimed there is no video conferencing.

In addition, only 75(6.5%) respondents indicated that there is educational radio service to a very great extent, 100(8.5%) said there is provision of educational radio service to a great extent, 375(32.4%) respondents indicated there is provision of educational radio service to a little extent while 607(52.5%) said there is no educational radio service. Regarding educational television service, 150 (13%) respondents indicated that the service is provided to a very great extent, 175 (15.1%) said the service is provided to a great extent, 375 (32.5%) indicated that the service is provided to a little extent while 607 (52.3) claimed it is not provided. As for interactive television service, 706 (6.5%) respondents indicated that to a very great extent that there is interactive television service 100(8.6%) said there is interactive television service to a great extent, 375(32.4%) indicated that there is interactive television service to a little extent, and 607 (82.5%) said there is no interactive television service. As to

having packaged instructional materials in the video cassettes, 450(38.9%) of the respondents indicated that to a very great extent they received instructional materials in video cassettes, 254 (22%) said the instructional materials packaged in video cassettes were given to students to a great extent, 150(13%) claimed that instructional materials packaged in video cassettes were given to a little extent, while 303 (26.2%) indicated that instructional materials are not packaged in video cassettes for the students. As regards having instructional materials in compact discs, 180 (15.6%) respondents said that to a very great extent instructional materials are packaged in the compact discs, 525 (45.4%) indicated that to a great extent, instructional materials come in compact discs, 300(30%) said instructional materials are packaged in compact discs to a little extent while 152(13.1%) that instructional materials are not packaged in compact discs. Talking about having instructional materials in audio cassettes only 60 (5.2%) respondents indicated that instructional materials are packaged in audio cassettes to a very great extent, while 293(25.3%) said the provision of instructional materials in audio cassettes is to a great extent, 325(20.0%) indicated that audio taped instructions are given to students to a little extent, 479(41.4%) claimed instructional materials are not packaged in audio cassettes for the students. None of the respondents agreed that they have instructional materials packaged in blue ray discs or zip cassettes.

### **Research Question 2:**

To what extent are the course contents uploaded?

Responding to this question, 329 (28.4%) of the students indicated that course contents are timely uploaded to a very great extent while 369(31.9%) said they are uploaded to a great extent however 328(28.3%) believed they are uploaded to a little extent .and 131 (11.3%) claimed they are not uploaded on time. Since a higher percentage of the respondents 60.3% reacted positively to the item, it may be said that the course content are timely uploaded, another variable like fund for airtime may hinder students from accessing course material in time since 557( 58.2%) of the respondents indicated

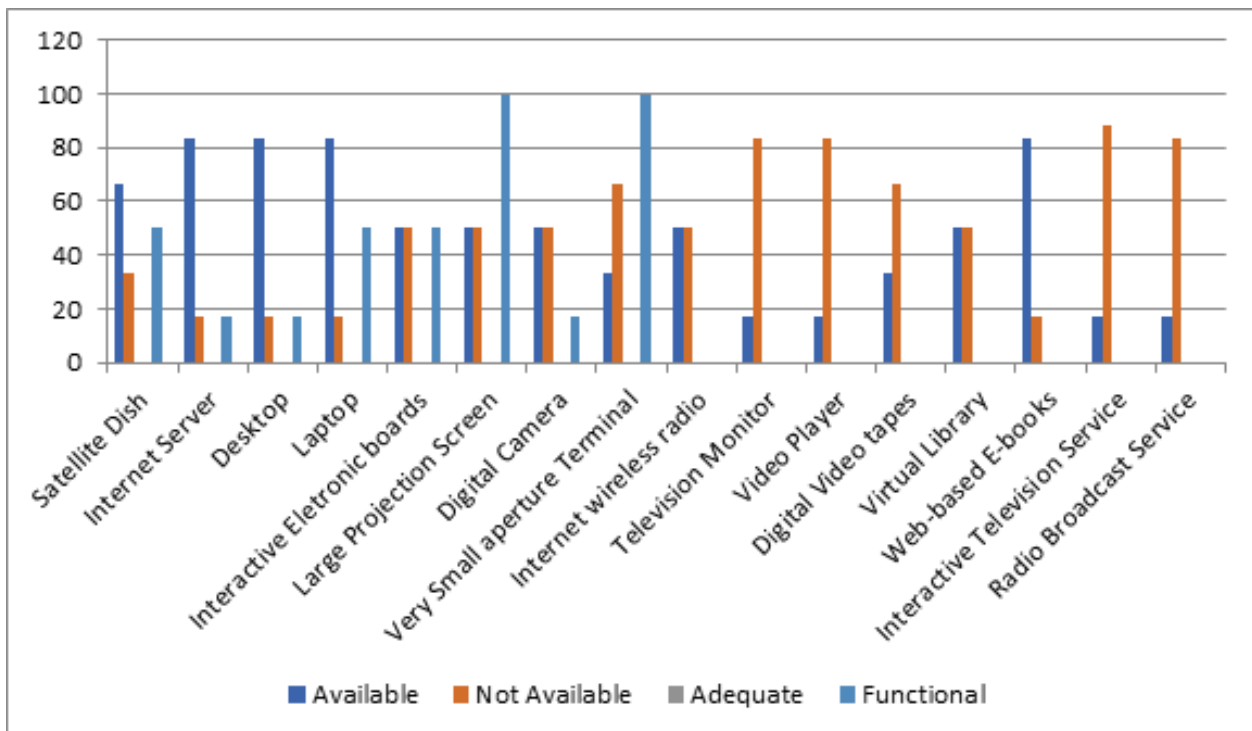
they do not have easy access to internet facilities.

In order to ascertain if the students' claim that the course contents are not uploaded on time, is due to financial constraints, which probably hinder them from accessing the internet, some items were included in the instruments to elicit responses to the extent they take the advantage of social media like Viber, To Go, Instant Message Online(IMO) for educational purposes, only 113 (9.8%) of the respondents said they make use of viber to a very great extent, 258(22.3%) responded that they make use of viber for educational purpose to a great extent while 561 (48.5) said they make use of it to a little extent and 225(29.5%) said they make use of it to no extent. On the use of 'To Go' for educational benefit 285 (24.6%) respondents claim they use it for educational benefit to a very

great extent, 472(40.6%) use it to a great extent, 241(20.8%) use it to a little extent while 159(13.7%) don't take advantage of that social medium for educational purpose. On the extent to which the respondents take advantage of IMO for educational purpose, 264 (22.8%), responded that they take advantage of IMO for educational advancement, to a very great extent 233(20.1%), said they make use of IMO for educational purpose to a great extent, 390(33.7%) take advantage of IMO for educational advancement to a little extent while 270(23.4%) do not make use it for educational purpose.

**Research Question 3:** What is the extent of the availability, adequacy and functionality of open educational facilities/ resources provided by NOUN?

**Figure 2.1: Open Educational Resources/Facilities in NOUN Southwest Centre**



**Fig.2.1 : Availability, Functionality and Adequacy of Open Educational Resource Facilities in NOUN Centres**

Figure 2.1 revealed the frequency and percentage of the extent of the availability, adequacy and functionality of educational facilities/ resources provided for students in sampled study centres of NOUN. Out of the seven (7) centres observed only two (2)(27.6%)

centres have auditoria, 5(73.4%) centres do not have. While five (5) (73.4%) centres have tutorial rooms (2) (27.6%) centres do not have a tutorial room. Only two (2) (27.6%) centres have science laboratories, 5(five) (73.4%) centres do not have. Three (3) (42.9%) centres have

computer laboratories four (4) (48.2%) centres do not have. Only 2(27.6%) centres have libraries, five (5) (73.4%)centres do not have. Three (3) (42.9%) centres have video conferencing centres, three (4) (48.2%) do not have. The same goes for furniture for students, three (42.9%) centres have furniture for the students three (4) (48.2%) centres do not have furniture for the students. Five (5)(73.4%) centres have writing boards while one (2) (27.6%) do not have. Five (5) centres (73.4%) have course materials in prints, two (2) (27.6%) centres do not have. Two (2) (27.6%) centres have library books, five (5) (73.4%) centres do not have. While two (2) (27.6%) centres have magazines in the libraries, five (5) (73.4%) centres do not have. The same goes for Newsletters and NOUN bulletins two (2) (27.6%) centres have each of them, five (5)(73.4%) centres do not have. As for the mode for OER, four (4) (48.2%) centres have satellite dishes, three (42.9%) centres do not have. Five (5) (73.4%) centres have internet servers while two (2)(27.6%) centres do not have. Five (5) centres (73.4%) have desktop computers, two (2) centres do not have. Five (5) (73.4%) centres have laptop computers while two (2)(27.6%) centres do not have laptop computers. Three (3) (42.9%) centres have interactive electronic boards, four (4)(48.2%) centres do not have. Three (3) (42.9%) centres have large projection screens, four (4)(48.2%) centres do not have. Three (3) (42.9%) centres have digital cameras, four (4) (48.2%) centres do not have. Two (2) (27.6%) centres have Very Small Aperture Terminal while four (5) (73.4%) centres do not have. Three (3) (42.9%) centres have internet wireless radio while four (4)(48.2%) centres do not have. A centre (13.3%) has TV monitor while six (6) (86.7%) centres do not have. One (1)(13.3%) centre has video players, six (6)(86.7%) centres do not have. Two (2) (27.6%) centres have digital video players five (5) (73.4%) centres do not have. Five (5)(73.4%)

centres have web –based e-books while one(2)(27.6%) centres do not have. One (1)(13.3) centre has interactive radio service while six(6)(86.7%) centres do not have. One (1) (13.3%) centre provides Radio Broadcast service, six(6) (86.7%) centres do not. The findings revealed that some of the available facilities are neither adequate nor functional. In a situation where two (2) (27.6%) centres have auditoriums and five (5)(73.4%) centres do not have, the facility is not adequate and not functional ,though the two auditoriums are in perfect condition in the two centres where they are available. Five (5) (73.4%) centres have tutorial rooms only two (2)(27.6%) centres do not have, the available tutorial rooms are in good condition so they are adequate and functional. Two (2) (27.6%) centres have science laboratories five (5)(73.4%) do not have. Hence science laboratories are neither adequate nor functional (though the two available are in good condition). The findings further revealed that the computer laboratories are not adequate since three (3) (42.9%) out of the seven sampled centres have computer laboratories; this is not adequate thus not functional. Library is also not adequate neither is it functional since two (27.6%) out of seven (7) sampled centres have. The two available are in good condition. Provision of video conferencing centres as well as furniture for students is also neither adequate nor functional. Three (3) (42.9%) out of seven (7) centres have both. Six (6) (86.7%) centres have writing boards, only one (1)(13.3%) centre does not have.

**Research Question 4a.** To what extent would the seven variables: (employment status of students, availability of learning resources, functionality of learning resources, adequacy of learning resources, access to open educational resources, level of facilitators online interaction and level of students' on line interaction) predict NOUN graduates' job performance?

**Table 1.1: Summary of Regression between Job Performance and Seven Independent Variables**

R = .877					
R Square = .770					
Adjusted R Square = .768					
Std. Error = 17.60					
Model	SS	df	MS	F	Sig.
Regression	190885.613	7	170126.516	549.025	.000a
Residual	356041.007	1149	309.870		
Total	1546926.620	1156			

Table 1.1 shows that the multiple correlation coefficients (R) of the combination of seven independent variables with NOUN graduates job performance is .877. The adjusted R Square (which estimates the variance accounted for by the combined independent variables to the dependent variable measure) is .768, which implies that the combination of all the independent variables (that is employment status, availability of resources, functionality of resources, adequacy of resources, facilitators online interaction, students' online interaction and access to open education resources) had 76.8% contribution to NOUN graduates job performance (that is the dependent variable). It

shows that the combination of the independent variables jointly related with NOUN graduates' job performance with positive high correlation at R = .877, a multiple R of .770 with Adjusted R square of .768. The multiple correlation of .877 indicates a high relationship among the seven independent variables and NOUN graduates job performance. Moreover, as shown in Table 4.6a combination of the seven independent variables explains 76.8%, 77% of the variance observed in NOUN graduates' performance. The observed R value was statistically significant at F(df 7,1149), =5.49; p<0.05). This implies that the seven variables are effective in predicting NOUN graduates' job performance.

**Research Question 4b.**

What are the relative contributions of these variables to the prediction?

**Table 1.2: Relative Contributions of the Predictors Variables on Job Performance**

Model	Unstandardised Coefficients		Standardised Coefficient	t	Sig.
	B	Std. Error			
Constant	265.780	30.480		8.720	.000
Employment Status	5.801	1.017	.083	5.705	.000
Availability of resources	4.195	.487	.343	8.619	.000
Functionality of resources	20.880	.532	.893	39.273	.000
Adequacy of resources	15.430	1.161	.400	13.292	.000
Facilitator online interaction	112.781	4.161	.935	27.104	.000
Student online interaction	74.079	2.672	.755	27.727	.000
Access to open education resources	.190	.066	.042	2.864	.004

a. Dependent variable Job performance



Table 1.2 shows that there are relative significant contributions of seven variables (employment status, availability of resources, functionality of resources, adequacy of resources access to open education resources, facilitator online interaction, students' online interaction) to the prediction of NOUN graduates job performance. Facilitator online interaction contributed most ( $\beta=.935, t=27.104$   $p<0.05$ ) followed by functionality of resources with ( $\beta=.893, t=39.273$   $p<0.05$ ). This is followed by students' online interaction with ( $\beta=.755, t=27.727$   $p<0.05$ ) adequacy of resources with ( $\beta=.400, t=13.292$   $p<0.05$ ) and availability of resources is next to it with ( $\beta$  value=.383,  $t=8.619$   $p<0.05$ ), next to it is employment status with ( $\beta =.083, t=5.705$   $p<0.05$ ) and access to open education resources with ( $\beta=0.42, t=2.864$   $p<0.05$ )

### Discussion of Findings

The findings of the study revealed that though NOUN provides some OERs for the students, it is not to a very great extent. Electricity supply is relatively constant in NOUN centres according to the respondents. Electricity supply is very essential to provision of OERs since most of the resources are energy powered. All the centres have generating sets but some do not put them on all the time while some centres do not put them off unless the school is closing for the day. The extent to which NOUN is providing easy access to internet service for the students is average.

The study further revealed that though NOUN has a radio station and collaborates with NTA for broadcast of educational programmes, majority of the students do not enjoy the services, probably due to ignorance, addiction to the traditional method of learning or limited coverage area of the broadcast media. This problem is not limited to the Southwest, for it corroborated the study carried out by Okonkwo (2012) which confirmed that the study centres in the South East have both broadcast and telecast facilities but the students do not enjoy the services. Naidoo (2002) asserted that the old media are not properly accessed in most African countries though radio is the foremost wireless technology. Okonkwo (2012) concluded that OERs cannot adequately meet the needs of

NOUN because some NOUN staff lack awareness and familiarity with them. However, NOUN established an OER unit in August 2014 to focus on OER related activities. The mandate of the unit is to stimulate OER awareness in NOUN and beyond, establish an open license framework in NOUN, contribute to the global OER repository of resources, offer high quality Mass Open Online Courses (MOOCs) to the global community, stimulate research on OERs, and collaborate with institutions, local and international organisations in OER related activities. A recent visit to NOUN iLearn which is the official e-learning platform of NOUN revealed the lists of courses available for e-facilitation and class discussions in various schools.

ICT plays a prime role in supporting various services in ODL. UNESCO organized the first Global forum on ICT in 2002 and there the term Open Education Resources (OERs) was adopted. OERs are very essential to open distance education. The blueprint on National Open and Distance Learning Programmes states that for there to be any fundamental change in the intellectual and social outlook of any society there must be an educational revolution. The goal of the educational policy is to address the quest or the spread of quality education. Globalisation and introduction of Information Technology (ICT) have resulted in a wave of information that brings radical changes in the educational needs of individuals and society at large. With the rise in social media tools, there has been a global movement towards collaboration in the development and soaring content. OERs can help address the issue of access to learning resources. (Open learning systems Education Trust, 2014) Although the adoption of open educational resources (OERs) in developing nations appears to be slower than in industrialized nations, students at Malawi's Bunda College of Agriculture who lacked a textbook on communication skills took advantage of it to get one. They obtained 75% of the book's content from the internet and added exercises, examples, and assignments that were pertinent to the local area. This book was found and adopted by a lecturer at the University of Jos. Jegede (20014), counselled NOUN to make adequate use of available OERs.

In the developing world, radio is one of the technologies that is frequently used and has the potential to be more productively used to meet the needs of under-served people. It is an excellent tool for delivering high-quality educational instruction to students both inside and outside the classroom. It also helps teachers with in-service training with the goal of enhancing both teaching and learning efficiency. Radio is a familiar technology even in the remotest rural communities (The Open Learning Systems Education Trust, 2012) Since NOUN has a radio station in Lagos; it should create an awareness for the students to listen to the educational instructions broadcast on the channel. NOUN should also negotiate airtime with radio stations so as to disseminate educational instructions to the students. It should take full advantage of the collaboration with NTA to provide access to quality education to its students.

On the uploading of the course content, the study revealed that the course contents are uploaded on time as majority of the respondents indicated so, however some students do not have access to the internet probably for lack of funds for purchase of data, although most of the respondents do not even make use of the social media for educational purpose. It was observed that most of the posts on NOUN students' congress on Facebook and NOUN students' forum on WhatsApp platform have no educational value. However, NOUN iLearn page on face book motivates them to join class discussions on courses, it also teaches them to form online groups for educational purpose. Not many of them have visited the page though the courses available on e-facilitation are few, thirty-six courses from 100 to 800 levels in the school of education is not enough for a semester. Students need money to be able to buy data for e-facilitation, they also need good smartphones to be able to enjoy the facilities provided by NOUN iLearn. It is a different case for those in rural areas where network problems may be a hindrance. This emphasises the advantages of the radio as a good and affordable OER. In a rural area like Awa where there may be no network for days, the time for online class discussion may be over by the time there is

network coverage as it is time bound.

As of the availability, adequacy and functionality of the OERs, the findings revealed that most of the educational facilities/resources are available but not adequate thus not functional. This corroborated Anih's (2012), assertion that many institutions that offer ODL find it difficult to procure necessary equipment so the few facilities available are overused. Anih (2012), also pointed out that many of the centres do not have a regular power supply thus the use of electronic gadgets is difficult if not impossible even when the use of electronic equipment is essential in ODL. The blueprint on NOUN states that for there to be any fundamental change in the intellectual and social outlook of any society there must be an educational revolution. The goal of the educational policy is to address the quest or the spread of quality education. NOUN's academic brief stated that face-to-face interaction (though limited in distance learning) is potentially superior to all other forms of interactions. To overcome this there should be progressive development and use of information and communication technology in both instructional methods and delivery; as well as the method or approach of providing support to the distance learners.

Libraries are indispensable in higher institutions, the library is a repository of resource knowledge, a reservoir of cultural, economic and technical information retrievable as spelt out in NOUN academic brief. Yet most of the centres do not have well-equipped libraries and some do not have at all. Students in all the centres in Lagos must go to the headquarters' library not minding their locations. The same goes for the use of laboratories. The availability, adequacy and functionality of these facilities go a long way to enhance quality of teaching and learning.

The findings also revealed that the combinations of independent variables (that is employment status of students, availability of learning resources, functionality of learning resources, adequacy of learning resources, access to open educational resources, facilitators online interaction and students' online interaction) had significant contributions to NOUN graduates' job performance. The obtained regression

equation model is effective in reliably predicting NOUN graduates' job performance using the seven predictor variables (that is employment status of students, availability of learning resources, functionality of learning materials, adequacy of learning materials, access to open educational resources, facilitators online interaction and students' online interaction). Hence, there is composite significant effect of the seven variables on NOUN graduates' job performance.

This is in line with Oyinlola (2016) who found that the combination of four independent variables (that is Instructional techniques during training, Human Material Availability, Instructional Material Utilization and Facilitator Qualification) variables are effective in predicting NTI/PPGDE graduates' professional competence. It also corroborates Oni's study (2013) which revealed that combination of independent variables contributed significantly to students' perception towards Education Trust Fund. It is further buttressed by Babatunde's (2013) finding that five independent variables combined to effectively predict MDG's beneficiary teachers pedagogical strategy score.

The findings revealed that the independent variables contributed significantly to NOUN graduates' job performance. Employment status, availability of resources, functionality of resources, adequacy of resources, facilitator online interaction and students' online interaction contributed meaningfully to the regression model. They are influential variables in the prediction of NOUN graduates' job performance. This corroborates Oni's (2013) submission that availability of resources collaborates with other factors notably functionality, adequacy of the resources as well as instructional strategy to contribute positively to students' perception of ETF programme.

The responses of the principals of schools where NOUN graduates were observed revealed that they are as good as graduates of conventional universities. They are punctual in school, they relate well with colleagues and parents, they do not wait to be called before going to classes and

they discuss their subject areas with confidence. The presence of observers in their classes did not make them uncomfortable. This finding is in line with Ajadi (2010), Jegede (2009), that there is no difference in the standard of academic work done in NOUN and conventional universities.

### Conclusion

NOUN is a school that offers ODL and employs educational patterns, techniques, and strategies that allow people to learn without constraints on time, place, age, prior educational background, entry requirements, age limit, gender, race, tribe, or state of origin. It is learner-driven, flexible, and self-directed learning that is supported by technology. However, some challenges hinder its complete openness which in turn hinder the achievement of some of the institution's objectives. They are inadequate electricity supply, inadequate OERs, insufficient online facilitation and insufficient use of the broadcasting industry.

### Recommendations

Some recommendations are provided to help with the effective utilization of OERs in NOUN based on the study's findings. Exposure to the appropriate use of open educational resources is necessary for facilitators. The centers should have backup power sources. NOUN should make 'wireless fidelity' (wifi) available in all study centres. E-libraries should be provided as part of physical libraries in NOUN.

### REFERENCES

- Anih, S. (2010). Rural ICT Mobilization [Paper presentation] Rural ICT Mobilization and Awareness Campaign. Enugu, Nigeria.
- Babatunde, O. (2015). Evaluation of the NTI/MDG capacity building programme in English Language in primary schools in Oyo State, Nigeria. [Unpublished doctoral dissertation] University of Ibadan.
- Bassey, S. U (2010) Resourcing in university planning: A systems approach. CASTALIA Ibadan Journal of Multicultural /Multidisciplinary Studies Vol 5,53-65.
- <https://hewlett.org.resource> for distance

- learning.
- Isuku, E.J.O. & Enumenu, B.O. (2012). Achieving global harvest to university education in Africa: challenges and strategies from the Nigerian experience. *Journal of sociology and education in Africa*. vol11, no 1; 107-127.
- JAMB, (2022, 2006, 2016, 2003/2004). Admissions into Nigerian universities. *Monitoring Report* by The Research Monitoring and Evaluation Department, Abuja, Nigeria.
- Jegede, O. (2013) Open Learning for Development. Towards empowerment and transformation <http://www.Olugbenrojegede.com>
- Jegede, O. (2003). Taking the distance out of higher education in 21<sup>st</sup> century Nigeria: An invited Convocation Lecture presented at the Federal Polytechnic, Oke, Anambra State, Friday, November 28.
- Jegede, O. (2004). Formulating viable national and regional Information and Communication Technologies and Open and Distance Learning Policies . an invited Keynote presentation at the Sub-Regional Ministerial Conference on Integration of ICTs in Education: Issues and Challenges in Africa, held at NICON-NUGA Hilton Hotel, Abuja, Nigeria 26-30 July.
- Jegede, O. (2005). Inaugural Speech at the Induction Workshop for NOUN Staff, facilitated by Commonwealth of Learning (COL), Victorian Island, Lagos, 17-21 January.
- Learning in Sub-Saharan Africa: A literature survey on policy and practice sponsored by The Commonwealth of Learning, April 2002 Final Report
- Oyinlola, A.B. (2014). Evaluation of the Post Graduate Diploma in Education Programme of the National Teachers' Institute in South west Nigeria. [Unpublished doctoral dissertation] University of Ibadan.
- Naidoo G, (2002). Effective Community Radio in Education, OLSET, Olivet House Stimens Street, Brahamofortein, South Africa.
- National Open University of Nigeria 2002. Blueprint on Open and distance learning programme. Lagos: Media and Information Unit, NOUN.
- Okede, (2012) .The African Symposium: *An Online Journal of The African Educational Research Network*, Number 1, Volume 3.
- Okonkwo, C. (2012). The African Symposium: *An Online Journal of The Africa Educational Research Network*, Number 1, Volume 3.
- Okorie, A.N. (2004). Management of Primary and Secondary Education in Nigeria. Ibadan. Codat Publication.
- Oni, L. E. (2013) Students and staff perception of the implementation of the Education Trust Fund Intervention Programme in universities in Southwestern Nigeria. [Unpublished doctoral dissertation] University of Ibadan.
- Open Learning Systems Education Trust (2014) Taylor, J.C. (2001). Fifth generation distance education. *e-Journal of Instructional Science and Technology (e-JIST)*, 4(1), 1-14
- UNESCO (2002). Open and Distance Learning: Trends, policy and strategy Paris: UNESCO  
World Declaration on Education for All Jomtien 1990 \_UNESCO