

## **Perception and use of open educational resources (OERs) by distance learning students of University of Ibadan, Nigeria**

Adenike Damilola Omoike<sup>1</sup> and Adetoun A. Oyelude<sup>2</sup>

Principal Librarian<sup>1</sup>, Deputy University Librarian<sup>2</sup>, Kenneth Dike Library, University of Ibadan

E-mail: <sup>1</sup>nikeomoike@yahoo.com, <sup>2</sup>sefoye@gmail.com

### **Abstract**

The study examined perception of open educational resources (OERs) by the distance learning students (DLS) of University of Ibadan. Survey research method was adopted for the study; 300 level and 400 level undergraduates of the Distance Learning Centre of University of Ibadan were selected for the study. Questionnaire was the main instrument for data collection. Data collected were analysed using frequency and percentages. The results reveal that majority (37.8%) are matured adults with understanding of Open Educational Resources (OERs) and that without the management and adequate use of OERs by students and teachers for communication and knowledge sharing, achieving sustainable education will be difficult. Digitised projects (20.0%), learning modules (11.1%) and open access journals (11.1%) were the main resources being perceived to be OERs in the institution. The students feel happy using open education resources developed by other universities and institutions (mean=3.33), and also noted that they feel happy sharing OERs with others (mean=3.29). Electronic resources, digitised projects (7, 15.6%), and YouTube (6, 13.3%) were the main resources used to supplement lecture notes, course notes and research work among distance learning students. Challenging factors revealed are lack of institutional support and institutional technology. Training of education personnel in the proper use of technologies for learning and teaching is very germane, therefore, the provision of adequate funding and training of human capital, as well as capacity building, are recommended for the attainment of sustainable education in Nigeria. OERs are indispensable in the bid for sustainable education development hence periodic training and retraining of students and teachers in the use of OERs are also recommended, for enhancing the Nigerian educational system.

**Keywords:** Perception, open educational resources, sustainable education, university of ibadan, distance learning students.

### **Introduction**

Education is an indispensable tool for economic, political, cultural and social development of a nation. Education is an instrument for change. That is, education is the source of growth and development of an individual. Therefore, education is very essential in terms of sustainable development of a nation. According to Oyewole and Osalusi (2016: 45), in Nigeria, education has been a huge government venture as the Federal Government is placing adequate attention on education because of its role in national growth and development (FGN, 2004). As a result, Oyewole (2008) reiterates that the economic growth of Nigeria hinges on the available personnel who are highly equipped with

sound education and not only the high quantity of natural resources which are available.

Educational curriculum in Nigeria at all levels have been predominantly book-based for a long time. Also, as the educational programme advances over the years, the curriculum and the book-driven education being practised today becomes more contracted, restrictive, irrelevant and inactive. This system of education has been on a steady decline which is evident in the mass failures of students in senior certificate examinations and the obvious inherent inadequacies of this kind of education, reflecting the poor standard and low quality compared to other advanced countries of the world. Olajide (2021) claimed that the

contribution of education to human capacity development, corporate growth and prosperity in Nigeria since independence is very minimal. In addition, 'what is left from the book-driven type of education in Nigeria is decay, fiscal indiscipline, political banditry, chaos and endemic corruption'.

Education is fostered and attainable through some process called teaching and learning process. These processes involve quality instructional practice to transfer knowledge through teaching. According to Monoranjan, Bharati and Jayasri (2013), quality instructional practice promotes the well-being of students, teachers and the school community. It improves students' and teachers' confidence and contributes to their sense of purpose for being at school; it builds community confidence in the quality of learning and teaching in the school.

Effective teachers use an array of teaching strategies because there is no single, universal approach that suits all situations. Also, quality teaching is required to foster sustainable education in Nigeria. Sustainable education standard should entrench quality as the hall mark that is ready to stand the test of time. The standards that are set as regards quality education should be geared towards all round development in the process of producing sound education that could impact positively towards the development of individual and the nation in general (Oyewole and Osalusi, 2016). They further opined that the essence of sustaining education standards in Nigeria requires active participation of the parents, students, educational administrators and education policy makers at both state and federal levels. This is through teaching and learning methods known as pedagogy.

Pedagogy is the processes and practices of classroom instruction that encompasses educational purposes and aims of communicating contents of courses and subjects to students (Ejeka and Mgbonyebi,

2021). Monoranjan, et al. (2013) viewed pedagogy as the art and science of teaching and instructional practices. Child Australia (2019) shared that pedagogy is an encompassing term concerned with what a teacher does to influence learning in others. Instructional practices or pedagogy involve the incorporation of an array of teaching strategies that support intellectual engagement, connectedness to the wider world, supportive classroom environments and recognition of difference, should be implemented across all key learning, and subject areas.

Open pedagogies have been referred to as the use of open educational resources in teaching and learning (Wiley, 2017) cited in (Paviotti, D'Angelo, Giacomini, and Cavicchi (2020). According to Hegarty (2015: 3), open practices are more likely when tools and resources are easily accessible and in common use, and that connected practitioners are more likely to be responsive to new ideas and thinking and to share their knowledge. Other authors, however, have shifted toward a more comprehensive concept of open pedagogies and generally openness (Conole, 2013), which can be broadly defined as "the natural progression of integrating socially just principles of human relations and the potential of current technology into the educational system" (Green, 2017).

Hilton, Wiley, Chaffee, Darrow, Guilmett, Harper and Hilton (2019) opine that even if a shared understanding of open pedagogies, which are constantly expanded by technologies has not been agreed yet, it can be argued that open pedagogies include the adoption of learning designs and approaches to teaching and learning that consider sharing, networking, and co-creation of knowledge at least. Hegarty (2015) opine that for educators to have a chance to become open practitioners and change the direction of education, they must

engage with eight specific attributes within an open pedagogy. These are; (a) participatory technology, (b) people, openness, trust, (c) innovation and creativity, (d) sharing ideas and resources, (e) connected community, (f) learner generated, (g) reflective practice; and (h) peer review.

Open educational resources provide teachers with an extended set of didactical approaches to make their education more active. Characteristics of the learning processes based on this pedagogy are to challenge students to develop skills like communication, a collaboration with learners and practitioners from other cultures, using ICT tools. These skills are considered important in this 21st century. Open educational resources with the use of ICT tools therefore, enhance sustainable education in Nigeria.

### **Statement of the problem**

The impact of teaching and learning to citizens of Nigeria with the use of open educational resources cannot be overemphasised. This is because open pedagogy initiates innovation in teaching and learning methods with the use of technologies and open educational resources. Nevertheless, literature has revealed that the adoption of open educational resources by teachers is not enough, since positive outcomes of learning require an awareness and active involvement of students. Studies have also showed that research on students' perceptions and beliefs about open educational resources is still underdeveloped in Nigeria as a result, the standard of education in the contemporary Nigeria has now become a paramount issue for national debate as some are of the opinion that the standards of education in Nigeria today are falling (Sani, 2014).

All the aforementioned literature attest to the fact that Nigeria as a nation is

not fully ready to adopt and use open educational resources to sustain the educational system. Even though we now live in the age of digital technologies and knowledge, the classroom has not changed significantly compared to the last century or even two centuries ago. This study therefore examined the perception of open educational resources by university of Ibadan distance learning students.

### **Objectives of the study**

The main objective was to examine perception of open educational resources by the distance learning students of university of Ibadan. The specific objectives were to:

1. determine the undergraduates understanding of the term open education;
2. investigate if the undergraduates have heard of the term "open educational resources" (OER);
3. investigate the type of resources being perceived by the undergraduates to be OER in their institution;
4. determine the perception of the undergraduates of OERs and sharing;
5. examine the resources the undergraduates use as students to supplement lecture notes, course notes and research work;
6. investigate if there is any formal training for the undergraduates on open educational resources in their institution;
7. determine the gains of open educational resources among the undergraduates;
8. examine the challenges of open educational resources among the undergraduates; and
9. investigate the platform(s) from which the undergraduates share resources with their peers in academic learning.

### Literature review

The advent of information communication technology (ICT) and the Internet has brought a paradigm shift in teaching and learning of students by teachers. As a result, Hegarty (2015) noted that the status quo for teaching has changed and teachers and learners are able to interact more easily, share their work, and collaborate in connected learning environments. Suggestions made in recent years by scholars who focused on connections between Internet technologies and open pedagogy is the importance of students creating resources that can be reused, particularly those with an open license. Another is the inclusion of internet enabled byproducts as a component of open pedagogy, and the third is that internet technologies themselves are a part of open pedagogy (Hilton, et al., 2019).

Several authors have equated the term open pedagogy to mean student-centered approaches connected with new technologies (Hodgkinson-Williams and Gray, 2009; Mackintosh, McGreal and Taylor, 2011; Hegarty, 2015). In the view of Hilton, et al. (2019), open educational practices can overlap the expanded definitions of open pedagogy. For example, Cronin (2017) defined open educational practices as “a broad descriptor of practices that include the creation, use, and reuse of open educational resources (OER) as well as open pedagogies and open sharing of teaching practices.” Open educational practices are all the activities that includes learning, teaching, research, information sharing and internet or online resources use by students and teachers. Paskevicius and Irvine (2019) also stressed that among the open education community, the recent turn to interest in open educational resources has generated an increase in discussion around how openness could support changes to

teaching and learning. The Open Educational Quality Initiative (2011: 13) defines open educational practices as:

a set of activities around instructional design and implementation of events and processes intended to support learning. They also include the creation, use and repurposing of Open Educational Resources (OER) and their adaptation to the contextual setting. They are documented in a portable format and made openly available.

Open pedagogy in a simple form simply mean Open Access or Open Educational Resources (OERs). According to Camilleri and Ehlers (2011: 6) cited in Paskevicius and Irvine (2019), the terms open pedagogy, open educational practices, open teaching, or open practices are often used interchangeably and have been defined as “the next phase in OER development, which will see a shift from a focus on resources to a focus on OEP being a combination of open resources use and open learning architectures to transform learning”. Open Educational Practices (OEPs) constitute the range of practices around the creation, use, and management of open educational resources with the intent to improve quality and innovate education” (OPAL, 2011a: 4). Wiley (2014) expanded the definition of open pedagogy to include a “5R” of open educational resources. Thus, they includes the open sourcing of student work on key dimensions such as being free to access, reuse, revise, remix, redistribute, and retain.

Paskevicius and Irvine (2019) emphasised that open educational practices

(OEP) are those teaching and learning practices enabled and supported by the open movement, either in making use of OER, engaging learners with the practices associated with open education, creating opportunities for learners to engage openly themselves, or making our professional practice more accessible. Olagoke-Oladokun et al. (2021) described service-learning pedagogy as a form of experiential learning that enables students to apply the knowledge acquired in the classroom towards the development of their immediate environment. Service-learning pedagogy as experiential learning advocates active learning contrary to the passive form of learning associated with the traditional method of teaching and learning in most Nigerian public universities.

The Open Educational Resources (OER) movement is considered to thrive on “distributed collaboration” using mobile, Internet, and social media applications and the consumption and production of artifacts for learning (Conole, de Laat, Dillon and Darby, 2008: 511). Hegarty (2015) asserted that a huge number of technologies are now available via the Internet to facilitate openness, when practitioners are willing to engage with multiple functionalities and approaches. Changes to the digital landscape are escalating at a rapid pace, and educators who are able to survive the disruption require a new set of skills and attitudes, if they are to contribute successfully to an open pedagogy.

Teaching is a process of imparting knowledge, skills, values, facts, attitudes and aptitude by a knowledgeable and more experienced person to a less knowledgeable and inexperienced individual (Mkpa, 2009). Learning facilitates the actualisation of the acquired knowledge into action. According to Adoga (2019: 247), for active teaching to occur there must be a teacher who facilitates and sustains the teaching. It is only when a

teacher is adequately sound in concept, methods, strategies and techniques that he/she can impart effectively to the learner.

Education revolves round the information world which is indispensable to every individual and the society at large. Education is the process of attaining knowledge and skills and the building up of the whole intellectual of human. The process of education is attainable through teaching, learning and interaction between the teacher and the students. Learning is not static, likewise education is not static. The sustainability of the educational system in Nigeria depends on so many factors. According to Ekwueme, Ekon and Ezenwa-Nebife (2016: 24), converse to the traditional way of teaching, education for sustainable development means adopting a more holistic approach to education with the aim of creating a better world for this generation and for the future generations. Bwala and Koroma (2005) cited in Adoga (2019), pointed out that education unlocks the door to modernisation and sustainable development but that it is the teacher that holds the key to the door. Thus, the teacher has the responsibility of translating educational policies into practice and programmes into action. Adoga (2019), therefore opined that for national development and peaceful co-existence to be attained, there is need to give priority to investment in human capital through teacher education and training. The Nigerian educational system needs to be responsive to the technological, social and economic needs of the society and provide the type of human resources needed in the industrial and economic sector.

Ekwueme et al. (2016: 24) opined that education for sustainability cannot be achieved without quality education of its citizenry which is free from all forms of discrimination. Among the implications for educational sustainability on national

development as mentioned by Ekwueme et al. (2016: 24) are that: (a) peace, justice, national development and democracy could be attained through Education for sustainability (b) poverty and disparity reduction would also be attained through Education at least to barest minimum (c) education improves quality of life, raises the economic status of families, lowers infant mortality and improves the educational attainment for the next generation, thereby raising the next generation's chances for economic and social well-being (d) education for sustainability could provide learners with the knowledge, dispositions, skills and values that will motivate and empower them to become active citizens and take measures to live more sustainably (e) education for sustainability incorporates key environmental challenges like climate change into core subjects like Mathematics, Science and Arts and also involves modifying the teaching- learning process to a more all- encompassing approach.

Atanda (2014) noted the significance of planning for sustaining national growth and development should aimed at the future, that is, it should 'foresee' and planned in a way that will meet the needs of the future generation. Sustaining development of the Nigeria education system should be systematically addressed to see to the need of effective teaching and learning. According to Oyewole and Osalusi (2016: 46), sustainable education standard should entrench quality as the hall mark that is ready to stand the test of time. The standards that are set as regards quality education should be geared towards all round development in the process of producing sound education that could impact positively towards the development of individual and the nation in general.

Instructional delivery all over the world has received a major paradigm shift due to COVID-19 pandemic, which affected

almost all the countries of the world. Current realities emanating from the post COVID-19 experience have shown that the educational space is expanding beyond the formal classroom environment (Soldatova et al., 2015). Also, the new open pedagogy and practices gives room for the use of the Internet video resources during the explanation of a subject and during the group work assignments, while students are also allowed to use smart phones and digital devices when preparing a group solution.

Hietajärvi et al. (2015) differentiated between the modern practice of teaching at school (book-based curriculum) and the new "social-digital generation" (open pedagogies and practices). The authors claimed that the current school practices is mainly characterised by traditional media, linearity and sequence, pure mental performance, limited textbook content, off line working, face-to-face (F2F), chalk and talk, paper and pencil, individual performance, closed classroom community, and knowledge acquisition. On the other hand, the socio-digital participation, in which open pedagogy and practices can be situated is characterised by flexible use of digital media, multitasking, intellectual ICT tools, internet searches, socio-digital networking, working on screen, making and sharing in groups, extended networks, as well as knowledge creation. Thus, there is need for a shift towards the new trends of socio-digital participation.

According to Hegarty (2015: 3), immersion in using and creating OER requires a significant change in practice and the development of specific attributes, such as openness, connectedness, trust, and innovation. When in place, these attributes translate into open educational practices. Five principles of openness are considered by Conole (2013) to be necessary for OEP, comprising open tools and processes that promote (a) collaboration and sharing of

information (b) connected communication about learning and teaching (c) collectivity to grow knowledge and resources (d) critique for the promotion of scholarship; and (e) serendipitous innovation (Conole, 2013).

Based on these principles, Hegarty (2015) therefore acknowledged that open practices are more likely when tools such as YouTube videos, Twitter, emails, Goggle+, and online tutorial platform and resources are easily accessible and in common use, and that connected practitioners are more likely to be responsive to new ideas and thinking and to share their knowledge. According to Paskevicius and Irvine (2019: 3), in designing learning that can be shared with others, faculty are better able to view each others learning designs and approaches, providing greater diffusion of innovation. In this way, engaging with open education has been posited to be a catalyst for pedagogical innovation in higher education, specifically for those not classically educated in pedagogy.

Studies have suggested that faculty should be encouraged to design assignments which involve learners in the creation and adaptation of OER (Jhangiani, Pitt, Hendricks, Key, and Lalonde, 2016). Engaging learners in the production of OER levels the faculty-learner relationship by engaging learners as co-producers of knowledge (Masterman, 2016). In designing learning that can be shared with others, faculty are better able to view one another's learning designs and approaches, providing greater diffusion of innovation. In this way, engaging with open education has been posited to be a catalyst for pedagogical

innovation in higher education, specifically for those not classically educated in pedagogy (Paskevicius and Irvine, 2019).

Similarly, quality education can only be achieved by trained professional teachers with genuine interest, experience in open pedagogy and practices, and love for the profession. Sustainable quality educational programmes are not designed for cramming and pouring down at examinations but rather for the sole "purpose of cultivating the art of creative, critical thinking and the development of the capacity to solve practical problems" (Olajide, 2021). The adoption and use of open pedagogy by teachers would help the students to gain hands-on knowledge that can forever be remembered and practiced, hence ensuring sustainability.

Hegarty (2015) noted that several case studies were compiled to illustrate the dimensions of OEPs globally. From these case studies, eight dimensions emerged that are used to describe strategies and policies for encouraging the organizational uptake of OER within an open learning design; the intention being to promote and implement practices that transform learning. These dimensions are considered by OPAL (2011b) as the foundations of successful organisational learning and teaching using OER.

The evidence surrounding each of the eight attributes (listed in *Figure 1*) associated with an open pedagogy and their contribution to the model are considered and deconstructed along with links to open educational practices. Each of these attributes is essential for successful contribution to an open pedagogy.



**Figure 1: Attributes of open pedagogy**

Hegarty (2015) found the components in each of the eight dimensions overlap in many ways and that it is impossible to discuss participatory technologies without mentioning innovation, trust, sharing, collaboration, connectedness, peer interaction and review, learner contributions, or reflective practice.

Factors that could affect the use of open pedagogy and practices in teaching and learning are inadequate ICT tools, poor institutional infrastructure facilities, epileptic power supply, lack of funds, lack of institutional support, inadequate skills possessed by teachers for teaching the use of open pedagogy among others. Banji and Ayankunle (2014), opined that inadequate and/or insufficient training in the ICT skills necessary to navigate the website successfully are also seen as challenges to be overcome. In spite of the tremendous amount of recent dialogues on education, many challenges still remain. The main challenge is the progressive increase in population, while the resources for sustaining the burgeoning population remains finite. Hallak (1991) cited in Osunwusi (2020), identifies five categories of obstacles to achieving Education for All (EFA) namely political factors, economic/financial factors, lack of adequate

demand for education, weak capacity, in managerial terms, for implementing the broad concept of EFA, and heavy inertia within the existing education systems.

Adewuyi (2012), in his study on “A framework for sustainable education in Nigeria: Strategies of re-integrating vocational skills into educational curriculum”, noted that the ability to create a sustainably conducive environment that will attract the investments necessary to provide adequate, efficient supplies of quality creative education is constrained by problems that can be characterized as follows: (a) Inefficient education-sector institutions, (b) Inappropriate education-sector policies, (c) Vocationally-imbalance educational curriculum, (d) Intermittent application of the rule of law, (e) Immature markets for education and entrepreneurial services, (f) Weak local creative capital markets (g) Poor performance by business management in education Institutions, (h) Lack of adoption of best practices and standards by education institutions and the public sector, (i) Lack of consumer knowledge about legal and commercial requirements for sustainable vocation-educational services, and Lack of roles for civil society in formulating public policies for practicum educational services.



Study by Luo, Hostetler, Freeman and Stefaniak (2020) on the power of open: benefits, barriers, and strategies for integration of open educational resources, found that the first barrier that prevented greater experience with OER centered on discoverability. The difficulty in discoverability according to De-Hart, Chetty and Archer (2015), means that selection of appropriate material and integration into the course takes a substantial amount of time. Secondly, OER is increasingly being augmented with computer-based applications, but accessibility poses a challenge when students are asked to have consistent access to technology. Lastly, the most frequently cited barrier in the literature was in regard to sustainability in adopting OER via institutional support (Friesen, 2009; Robertson, 2010; Windle, Wharrad, McCormick, Lavery and Taylor, 2010; Panke, 2011; Murphy, 2013; Mtebe and Raisamo, 2014; Anderson, Gaines, Leachman and Williamson, 2017; Hassall and Lewis, 2017). Studies repeatedly alluded to systemic burdens embedded within higher education institutions that make it difficult not only to start an OER initiative, but to continue it after initial funding runs out (Luo, et al., 2020).

## Methods

The descriptive research design of the survey type was adopted for this study. Questionnaire was the instrument used by the researchers for the collection of reliable information and data. The instrument is titled “Perception of open educational resources by University of Ibadan Distance Learning Students” Scale (POERBUIDLS) contained questions developed into two sections. Section A; Background information, and Section B; perception of open educational resources. The total population of this study was forty five undergraduates of the Distance Learning

Centre of University of Ibadan, Nigeria. Random sampling was employed to select the students from 300 and 400 levels as participants for the study. The choice of selecting these group was based on their understanding of open educational resources (OERs) having spent more than two years in the university. A total of 45 copies of questionnaire were administered, retrieved and found valid for the study. The reliability coefficient for the instruments was tested to be 0.84 using Cronbach’s alpha method. The questionnaire was pre-tested on full term undergraduates of University of Ibadan that were not included in the study. The data collected for this study were analysed using frequency and percentages.

## Results and discussion

Demographic characteristics such as level of study, gender, age and faculty of respondents were analysed using descriptive statistics of frequency counts and percentages and the result is as presented in Table 1. The demographic characteristics were analysed using frequency and percentages and the result is as presented in Table 1.

As displayed in Table 1, a majority of the respondents 23 (51.1%) were 400 level students, while the remaining 22 (48.9%) were 300 level students. For gender distribution of the respondents, majority 29 (64.4%) were female while their male counterparts were 16 (35.6%). This implies that majority of the students per level of study are female.

The distribution of age of respondents showed that out of the 45 respondents, majority 17 (37.8%) were between 40 and 49 years of age, while 12 (26.7%) respondents were within 18 and 29 years of age. About 11 (24.4%) of the respondents were between the ages 30-39 years, while, only 5 (11.1%) were 50 and 59 years. The result implies that majority of the

respondents are matured adults. In terms of the Faculty of respondents, majority 17 (37.8%) of the respondents were in the Faculty of Education, 12 (26.7%) were in the Faculty of the Social Sciences and 6 (13.3%) were in the Faculty of Science. Five (11.1%) were in the Faculty of Arts, 3 (6.7%) were in Department of Public Health,

while, only 2 (4.4%) were in the Faculty of Technology. Majority of the respondents were education and social sciences based.

The respondents' perception of the term "open education" was sought. Table 2 reveals the understanding by the respondents, of the term.

**Table 1: Demographic characteristics of respondents**

Demographics	Frequency	Percentage (%)
<b>Level of study of respondents</b>		
300 Level	22	48.9
400 Level	23	51.1
<b>Gender of respondents</b>		
Male	16	35.6
Female	29	64.4
<b>Age of respondents</b>		
18-29 years	12	26.7
30-39 years	11	24.4
40-49 years	17	37.8
50-59 years	5	11.1
<b>Faculty of respondents</b>		
Arts	5	11.1
Social science	12	26.7
Science	6	13.3
Education	17	37.8
Technology	2	4.4
Public Health	3	6.7

**Table 2: Understanding of the term "open education"**

Understanding of the term "open education"	Frequency	(%)
Educational instructions passed across to students in classroom situations.	2	4.4
It is a form of education beyond the four walls of the classroom.	9	20.0
Education accessible to all	6	13.3
Education is the process which helps to develop man.	1	2.2
Not heard of it before	1	2.2
Access to education and without barriers	3	6.7
An act of making learning materials and educational opportunities available without restrictions	2	4.4
Formal education that can be obtained from any source and can be certified by formal examinations.	5	11.1
Free access to learning platform	3	6.7
It makes learning resources/materials readily available for students to aid learning	1	2.2
It's a way of educating people using digital technologies, thereby reaching a whole lot of people at the same time.	8	17.8
Method of teaching within and outside the classroom.	1	2.2

Teaching and learning accessible by numbers of students via Internet	3	6.7
--	---	-----

Table 2 presents the respondents' understanding of the term open education. Majority 9 (20.0%) of the respondents indicated that it is a form of education beyond the four walls of the classroom, while 8 (17.8%) indicated that it is a way of educating people using digital technologies, thereby reaching a whole lot of people at the same time. About 6 (13.3%) respondents indicated that it is education accessible to all, and 5 (11.1%) indicated that is a formal education that can be obtained from any source and can be certified by formal examinations. It implies that the respondents have understanding of the term Open

Education. This finding agreed with the findings of Conole, de Laat, Dillon and Darby (2018: 511), who stressed that the open educational resources (OER) movement is considered to thrive on "distributed collaboration" using mobile, Internet, and social media applications and the consumption and production of artifacts for learning. It also underpins Hegarty's (2015) assertion that a huge number of technologies are now available via the Internet to facilitate openness, when practitioners are willing to engage with multiple functionalities and approaches.

**Table 3. Awareness of the term open educational resources (OER)**

Awareness of the term "open educational resources" (OER)	Frequency	Percentage (%)
Yes	30	66.7
No	12	26.7
Maybe	3	6.7
<b>Total</b>	<b>45</b>	<b>100.0</b>

It is shown in Table 3 that the highest number of respondents (30; 66.7%) indicated having heard of the term OER, and 12 (26.7%) of the respondents indicated in the negative. Only 3 (6.7%) indicated "Maybe" that is, they are not certain if they have heard of the term OER or not. It implies that majority of the respondents have heard of the term OER. This finding is

in line with the findings of Soldatova et al. (2015), who reported that the new open pedagogy and practices gives room for the use of the Internet video resources during the explanation of a subject and during the group work assignments, while students are also allowed to use smart phones and digital devices when preparing a group solution.

**Table 4: Resources perceived to be OER in the institution**

Resources	Frequency	Percentage (%)
Lecture notes	1	2.2
Electronic resources	2	4.4
Online databases	4	8.9
Open access journals	5	11.1
Open textbooks	1	2.2
E- journals	4	8.9
Digitised projects	9	20.0
YouTube videos	3	6.7
Wikipedia	4	8.9
Conference papers	3	6.7

Learning modules	5	11.1
Streaming videos	3	6.7
Education	1	2.2

It can be seen in Table 4 that a majority 9 (20.0%) of the respondents indicated that digitised projects, learning modules and Open access journals (11.1%)

respectively, online databases, e- journals and Wikipedia 4 (8.9%) respectively, were the main type of resources being perceived to be OER in their institution.

**Table 5: Perception of OERs and sharing**

<b>Resources used to gather information</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>	<b>Mean</b>	<b>S.D</b>
UI [University of Ibadan] should have educational resources for free with other students from other universities	15 (33.3%)	24 (53.3%)	2 (4.4%)	4 (8.9%)	1.89	.859
I do not feel happy sharing open education resources with others	1 (2.2%)	4 (8.9%)	21 (46.7%)	19 (42.2%)	3.29	.727
OER's should be restricted sometimes	1 (2.2%)	11 (24.4%)	22 (48.9%)	11 (24.4%)	2.96	.767
Students should use educational resources developed by other universities & institutions in their learning	12 (26.7%)	24 (53.3%)	7 (15.6%)	2 (4.4%)	1.98	.783
Lecturers should use educational resources developed by other universities and institutions in their lecture	7 (15.6%)	28 (62.2%)	7 (15.6%)	3 (6.7%)	2.13	.757
Being a student, I would personally feel happy using open education resources developed by other universities and institutions	9 (20%)	27 (60%)	7 (15.6%)	2 (4.4%)	2.04	.737
I personally feel unhappy using open education resources developed by other universities and institutions	1(2.2%)	4 (8.9%)	19 (42.2%)	21 (46.7%)	3.33	.739

Table 5 displays the perception of the respondents on OERs and sharing. The results show that a majority of the respondents disagreed with the statement “I personally feel unhappy using open education resources developed by other universities and institutions”. That is, they feel happy using open education resources developed by other universities and institutions (mean=3.33). This perception was followed by relatively large number that

noted that they feel happy sharing OERs with others (mean=3.29). These findings align with the five principles of openness considered by Conole (2013) to be necessary for OEP, such as collaboration and sharing of information, connected communication about learning and teaching, collectivity to grow knowledge and resources, critique for the promotion of scholarship; and serendipitous innovation (Conole, 2013).

**Table 6: Resources to supplement lecture notes, course notes and research work**

<b>Resources</b>	<b>Frequency</b>	<b>Percentage (%)</b>
------------------	------------------	-----------------------

Electronic resources	8	17.8
Online databases	1	2.2
E- books	3	6.7
E- journals	2	4.4
Digitised projects	7	15.6
YouTube	6	13.3
Wikipedia	5	11.1
YouTube videos	4	8.9
Conference papers	4	8.9
Learning modules	2	4.4
Digital learning objects	1	2.2
Streaming videos	2	4.4

Table 6 reveals that majority 8 (17.8%) of the respondents indicated that electronic resources, digitised projects 7 (15.6%), YouTube 6 (13.3%), and Wikipedia 5 (11.1%) were the main resources student use to supplement lecture notes, course notes and research work. This

finding corroborated the findings of Cronin (2017), who defined open educational practices as “a broad descriptor of practices that include the creation, use, and reuse of open educational resources (OER) and open sharing of teaching practices.

**Table 7: Existence of formal training on open education in the institution**

Response	Frequency	Percentage (%)
Yes	12	26.7
No	24	53.3
Maybe	9	20.9
<b>Total</b>	<b>45</b>	<b>100.0</b>

Table 7 shows that the highest number of respondents, 24 (53.3%) indicated “No” that is, there is no formal training on Open Education in their institution, and 12 (26.7%) of the respondents indicated “Yes” that is, there is a formal training on Open Education in their institution. While, 9 (20.9%) indicated

“Maybe” that is, they are not sure of formal training on Open Education in their institution. This finding is in line with the findings of Adoga (2019), who opined that for national development and peaceful co-existence to be attained, there is need to give priority to investment in human capital through teacher education and training.

**Table 8: Benefits of open educational resources**

Benefits	Frequency	Percent
Exposure to open resources	28	62.2
Ability to connect fast	5	11.1
Cheaper way of getting education	7	15.6
Networking globally	5	11.1
<b>Total</b>	<b>45</b>	<b>100.0</b>

Table 8 shows that majority 28 (62.2%) of the respondents indicated that exposure to open resources was their gains of Open Education. This finding is in

consonance with the findings of Camilleri and Ehlers (2011: 6) cited in Paskevicius and Irvine (2019), who viewed open pedagogy as “the next phase in OER

development, which will see a shift from a focus on resources to a focus on OEP being a combination of open resources use and

open learning architectures to transform learning”.

**Table 9: Challenges of open educational resources**

Challenges	Frequency	%
Epileptic power supply	8	17.8
Poor Internet connectivity	4	8.9
Lack of Library sensitization on the use of open educational resources	6	13.3
Low awareness of open educational resources	2	4.4
Funding	10	22.2
Lack of training	12	26.7
Inadequate Manpower	2	4.4
Time-consuming process in finding open education resources	1	2.2
Total	45	100.0

Table 9 shows that majority 12 (26.7%) of the respondents indicated that lack of training, funding 10 (22.2%), and epileptic power supply 8 (17.8%), were the main challenges of open education. This is in line with the findings of Banji and Ayankunle (2014). They opined that inadequate and/or insufficient training in the ICT skills necessary to navigate the website successfully are also seen as challenges to be overcome. In addition, Hallak (1991)

cited in Osunwusi (2020), identified five categories of obstacles to achieving Education for All (EFA) namely political factors, economic/financial factors, lack of adequate demand for education, weak capacity, in managerial terms, for implementing the broad concept of EFA, and heavy inertia within the existing education systems. These are also identified in the study.

**Table 10: Platform(s) for sharing resources with peers in academic learning**

Platforms	Always	Often	Sometimes	Never	Mean	S.D
Facebook	1 (2.2%)	9 (20.0%)	17 (37.8%)	18(40.0%)	1.84	.824
Twitter	1(2.2%)	12(26.7%)	13(28.9%)	19(42.2%)	1.89	.885
YouTube	4(8.9%)	5(11.1%)	13(28.9%)	23(51.1%)	1.78	.974
E-mail	10(22.2%)	23(51.1%)	10(22.2%)	2(4.4%)	2.91	.793
Hardcopies	12(26.7%)	20(44.4%)	10(22.2%)	3(6.7%)	2.91	.874
Goggle+	3(6.7%)	14(31.1%)	15(33.3%)	13(28.9%)	2.16	.928
YouTube videos	1(2.2%)	10(22.2%)	13(28.9%)	21(46.7%)	1.80	.869
Online tutorials	4(8.9%)	19(42.2%)	15(33.3%)	7(15.6%)	2.44	.867

Table 10 reveals that majority 23 (51.1%) of the respondents indicated emails (mean=2.91) was the platform(s) often used to share resources with peers in academic learning, followed by 20 (44.4%) that indicated hardcopies was the platform(s) often used to share resources with peers in

academic learning, and followed by 19 (42.2%) respondents that indicated online tutorials was the platform(s) often used to share resources with peers in academic learning respectively. These results corroborated the findings of Hegarty (2015) who acknowledged that open practices are

more likely when tools such as YouTube videos, Twitter, emails, Goggle+, and online tutorial platform and resources are easily accessible and in common use, and that connected practitioners are more likely to be responsive to new ideas and thinking and to share their knowledge.

### Conclusion

Education is an instrument for change and a source of growth and development of an individual. Sustainable education in Nigeria is a mission that could be achieved provided there is a consistent move or agitation by the educationist in keeping abreast of reasons for sustainable education. This is because sustainable education will go a long way to protect the future of the individual in terms of growth and development and the future of the country at large in terms of social and political development and economic growth and positive decision making that can sustain the standard of education. Apparently, sustainable education is enhanced by using open educational resources. Without the management and adequate use of open educational resources by students and teachers for communication and knowledge sharing, there can hardly be sustainable education. Nevertheless, the challenging factors to open educational resources in Nigeria are funding, institutional support, institutional technology among others. Therefore, to ensure that the standard of education in Nigeria can compete with that of her contemporaries from other countries, there is need to sustain the policy of “*Education for All*”.

The following recommendations are therefore put forward:

1. The respondents have heard of the term OERs and they feel happy using OERs developed by other universities and institutions. In order to keep abreast with the use of OERs, they should always ensure

using the OERs for academic activities including preparation of term papers and their project work.

2. Government should provide proper allocation of funding for education as funds are a major problem to sustainable education in any country. These funds could be used to acquire necessary information and communication technology (ICT) facilities that will help to develop OERs to enhance sustainable education in Nigeria.
3. Epileptic power supply is a major problem that can hinder the effective use of OERs in institutions, therefore, institutions should endeavour to provide alternative power supply for the effective use of OERs by students and staff in their domain.
4. More platforms for sharing learning materials or knowledge, such as Facebook, Twitter, YouTube and YouTube videos should be encouraged for use among distance learning students and their teachers. Benefits of OERs are many and varied therefore their enhanced use for teaching and learning should be taken advantage of by institutions especially those with distance learning programmes.
5. There is a need for periodic formal training and retraining of teachers and educators in the use of open educational resources to facilitate its enhanced adoption in the Nigerian educational system.

### References

- Adewuyi, A. P. (2012). A Framework for Sustainable Education in Nigeria: Strategies of Re-integrating Vocational Skills into Educational Curriculum. <http://eprints.covenant>

- university.edu.ng/3105/1/A%20Framework%20for%20Sustainable%20Education%20in%20Nigeria%20Strategies%20of%20Re-integrating.pdf
- Adoga, R. O. O. (2019). Teacher Education for Sustainable Development: Implications for Counselling. *Prestige Journal of Education, Vol. 2* (1), June 2019
- Anderson, T., Gaines, A., Leachman, C., and Williamson, E. P. (2017). Faculty and instructor perceptions of open educational resources in engineering. *The Reference Librarian, 58*(4), 257-277. doi: <https://doi.org/10.1080/02763877.2017.1355768>
- Atanda, A. I. (2014). Quality education for sustainable development : A task for every stakeholder. In B.O. Emunemu & F. S. Akinwumi(Eds), *Educational management in Africa: Papers in honour of Professor John Iheukwumere Nwankwo*, University of Ibadan, Nigeria.336-344.
- Banji, F. J., and Ayankunle, S. (2014). Open Education Resources and Teacher Professional Development in Nigeria: Prospects and Challenges. <https://docplayer.net/91965060-Open-education-resources-and-teacher-professional-development-in-nigeria-prospects-and-challenges.html>
- Bwala, M. H., and Koroma, D. S. (2005). *Toward Sustainable Development of Nigeria*. Lagos: Nigeria CSS Book Shops.
- Camilleri, A. F., and Ehlers, U. D. (2011). Mainstreaming Open Educational Practice: Recommendations for Policy. Retrieved from European Foundation for Quality in E-Learning: The OPAL Consortium website: [https://efquel.org/wp-content/uploads/2012/03/Policy\\_Support\\_OEP.pdf](https://efquel.org/wp-content/uploads/2012/03/Policy_Support_OEP.pdf).
- Child Australia. (2019). What is pedagogy? How does it influence our practice?. Australia: Child Australia. <https://www.childaustralia.org.au/wp-content/uploads/2017/02/CA-Statement-Pedagogy.pdf>
- Conole, G. (2013). Designing for learning in an open world. In *Designing for Learning in an Open World*. Springer New York. <https://doi.org/10.1007/978-1-4419-8517-0>
- Conole, G. (2013). *Designing for learning in an open world*. Springer: New York.
- Conole, G., de Laat, M., Dillon, T., and Darby, J. (2008). Disruptive technologies, pedagogical innovation: What's new? Findings from an in-depth study of students' use and perception of technology. *Journal of Computers & Education, 50*, 511–524. [10.1016/j.compedu.2007.09.009](https://doi.org/10.1016/j.compedu.2007.09.009).
- Cronin, C. (2017). Openness and praxis: exploring the use of open educational practices in higher education. *The International Review of Research in Open and Distributed Learning, 18*(5). <https://doi.org/10.19173/irrodl.v18i5.3096>
- De-Hart, K., Chetty, Y., and Archer, E. (2015). Uptake of OER by staff in distance education in South Africa. *The International Review of Research in Open and Distributed Learning, 16*(2), 18-45.
- Ejeka, C. A. and Mgbonyebi, D. C. (2021). Improving Quality of Pedagogy/Instructional Practices in Office Technology and Management Programme in Polytechnics in Delta State Nigeria for Sustainable Growth, Security and Development.



- European American Journals, 9(4), 3-19.
- Ejeka, C. A., and Mgbonyebi, D. C. (2021). Improving Quality of Pedagogy/Instructional Practices in Office Technology and Management Programme in Polytechnics in Delta State Nigeria for Sustainable Growth, Security and Development. *International Journal of Education, Learning and Development, Vol. 9* (4), pp.30-45.
- Ekwueme, C. O., Ekon, E. E., and Ezenwa-Nebife, D. C. (2016). Education for sustainability through academic freedom. *Global Journal of Educational Research, 15*, 23-30. <https://www.ajol.info/index.php/gjed/article/view/132854>
- Friesen, N. (2009). Open educational resources: New possibilities for change and sustainability. *The International Review of Research in Open and Distributed Learning, 10*(5), 1-13.
- Green, A. G. (2017). *What is Open Pedagogy?* <https://greengeographer.com/what-is-openpedagogy/>
- Hassall, C., and Lewis, D. I. (2017). Institutional and technological barriers to the use of open educational resources (OERs) in physiology and medical education. *Advances in Physiology Education, 41*(1), 77-81. 10.1152/advan.00171.2016.
- Hegarty, B. (2015). Attributes of Open Pedagogy: A Model for Using Open Educational Resources. *Educational Technology*/4 July –August 2015.
- Hietajärvi, L., Tuominen-Soini, H., Hakkarainen, K., Salmela-Aro, K. and Lonka, K. (2015). Is student motivation related to socio-digital participation? A person-oriented approach. *Procedia- Social and Behavioral Sciences. 171*, 1156-1112.10.1016/j.sbspro.2015.01.226
- Hilton III, J., Wiley, D., Chaffee, R., Darrow, J., Guilmett, J., Harper, S., and Hilton, B. (2019). Student Perceptions of Open Pedagogy: An Exploratory Study. *Open Praxis, 11*(3), 275. <https://doi.org/10.5944/openpraxis.11.3.973>.
- Hodgkinson-Williams, C., and Gray, E. (2009). Degrees of Openness: The emergence of Open Educational Resources at the University of Cape Town. *International Journal of Education and Development using ICT [Online], 5*(5), 101–116. <http://hdl.handle.net/11427/8860>.
- Jhangiani, R., Pitt, R., Hendricks, C., Key, J., and Lalonde, C. (2016). Exploring faculty use of open educational resources at British Columbia Post-Secondary Institutions. [https://bccampus.ca/files/2016/01/BCFacultyUseOfOER\\_final.pdf](https://bccampus.ca/files/2016/01/BCFacultyUseOfOER_final.pdf).
- Luo, T., Hostetler, K., Freeman, C., and Stefaniak, J. (2020). The power of open: Benefits, barriers, and strategies for integration of open educational resources. *Open Learning, 35*(2), 140-158. 10.1080/02680513.2019.1677222.
- Mackintosh, W., McGreal, R., and Taylor, J. (2011). Open education resources (OER) for assessment and credit for students project: Towards a logic model and plan for action. *Technology Enhanced Knowledge Research Institute, Athabasca University*. [https://auspace.athabascau.ca/bitstream/handle/2149/3039/Report\\_OACSFinalVersion.pdf?sequence=1&isAllowed=y](https://auspace.athabascau.ca/bitstream/handle/2149/3039/Report_OACSFinalVersion.pdf?sequence=1&isAllowed=y).
- Masterman, E. (2016). Bringing open educational practice to a research-intensive University: Prospects and

- challenges. *Electronic Journal of E-Learning*, 14(1).
- Mkpa, N. D. (2009). Teaching Methods and Strategies. In U. M. O. Ivowi, K. Nwifo, C. Nwagbara, J. Ukwungwu, E. I. Emah and G. Uya (Eds.), *Curriculum theory and Practice*. Curriculum Organisation of Nigeria.
- Monoranjana, B., Bharati, B. R and Jayasri, B. (2013). Role of Pedagogy in effective teaching. *Basic Research Journal of Education Research and Review*, 2(1), 1 - 5.
- Mtebe, J. S., and Raisamo, R. (2014). Investigating perceived barriers to the use of open educational resources in higher education in Tanzania. *The International Review of Research in Open and Distributed Learning*, 15(2), 43-65.
- Murphy, A. (2013). Open educational practices in higher education: Institutional adoption and challenges. *Distance Education*, 34(2), 201-217. <https://doi.org/10.1080/01587919.2013.793641>.
- Olagoke-Oladokun, L. I., Mokhtar, M., Hassan, Z., Yusuf, S., Ali, M. and Hashim, S. (2021). Challenges of Implementing Service-Learning Pedagogy In Nigeria Public Universities. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(3), 4805-4816.
- Olajide, W. (2021). Education in Nigeria, the poverty of pedagogy and its discontent. <https://www.icirnigeria.org/education-in-nigeria-the-poverty-of-pedagogy-and-its-discontent/>
- Open Educational Quality Initiative (2011). Beyond OER: Shifting the focus to open educational practices. *The 2011 OPAL Report*. [http://duepublico.uni-duisburg-essen.de/servlets/](http://duepublico.uni-duisburg-essen.de/servlets/DerivateServlet/Derivate25907/OPALReport2011_Beyond_OER.pdf)
- Osunwusi, A. O. (2020). The Nigerian Education Milieu in the SDG Era: The Roles, Values, Challenges and Prospects of ODL and Lifelong Learning. *International Journal of Learning and Development*, Vol. 10 (1).
- Oyewole, B. K. (2008). Instructional supervision and secondary school teachers' job performance in Ekiti State, Nigeria. Unpublished Ph.D. thesis, Adekunle Ajasin University, Akungba- Akoko.
- Oyewole, B. K., and Osalusi, F. M. (2016). Towards Actualising Sustainable Education Standards in Nigeria. *International Journal of Learning, Teaching and Educational Research*, Vol. 15 (9), pp. 44-54.
- Panke, S. (2011). Open educational resources: Future directions for research and practice. In T. Bastiaens, & M. Ebner (Eds.) *ED-MEDIA 2011 Proceedings of the World Conference on Educational Multimedia, Hypermedia and Telecommunications* (pp. 1429-1438). Lisbon, Portugal: Association for the Advancement of Computing in Education. <https://www.learn-techlib.org/p/38053>.
- Paskevicius, M., and Irvine, V. (2019). Practicalities of implementing open pedagogy in higher education. *Paskevicius and Irvine Smart Learning Environments*, Vol.6 (23). <https://doi.org/10.1186/s40561-019-0110-5>.
- Paviotti, G., D'Angelo, I., Giacconi, C., and Cavicchi, A. (2020). Open pedagogy practices: a case study in undergraduate education. *Journal of E-Learning and Knowledge Society*, 16(4) (2020), 1-10.

- Robertson, R. J. (2010). *What do academic libraries have to do with Open Educational Resources? Long term sustainability of open education projects*. In Open Ed 2010 Proceedings. Barcelona, Spain: UOC, OU, BYU. <http://hdl.handle.net/10609/4847>.
- Sani, B. M. (2014). Improving standard of education. [www.dailytrust.com.ng/dailyindex](http://www.dailytrust.com.ng/dailyindex).
- Soldatova, G., Zotova, E., Lebesheva, M. and Shlyapnikov V. (2015). Digital Literacy and Internet Safety. Methodological Textbook for Specialists of General Education. Moscow: Google; 311 pp. [https://www.ijmrset.com/upload/24\\_Traditions\\_NC.pdf](https://www.ijmrset.com/upload/24_Traditions_NC.pdf)
- Wiley, D. (2014). *The Access Compromise and the 5th R*. Retrieved from <https://opencontent.org/blog/archives/3221>
- Wiley, D. (2017). *OER-Enabled Pedagogy*. <https://opencontent.org/blog/archives/5009>.
- Windle, R. J., Wharrad, H., McCormick, D., Lavery, H., and Taylor, M. (2010). Sharing and reuse in OER: Experiences gained from open reusable learning objects in health. *Journal of Interactive Media in Education*, 33(1), 1-19. doi: <http://doi.org/10.5334/2010-4>.