



## **Role of Digital Literacy of Staff for Effective Administration in Open and Distance Learning in Nigeria Universities**

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### **ABSTRACT**

This paper investigated the role of digital literacy of staff for effective administration in open and distance learning in Nigeria Universities. Two research questions and two hypotheses were formulated to guide the study. The researcher adopted descriptive design. The sample size of the study was achieved by simple random sampling technique, a sample size of ten (10) staff from each state centres of the South-South Zone of the National Open University of Nigeria (NOUN) with the total of sixty (60) staff selected for the sample size. The instrument used for data collection was structured questionnaire titled: “Role of Digital Literacy of Staff for Effective Administration Questionnaire (RDLSEAQ)”. The reliability of the instrument was obtained using test retest method, and the Pearson Product Moment Correlation Coefficient in calculating a reliability index of 0.81. The instrument was validated by experts in the Department of Educational Management and Planning. The data was analyzed using weighted mean to answer the research questions and hypotheses were tested with the use of z-statistics at 0.05 level of significance. The findings revealed that the respondents are highly literate in digital devices; they rate themselves high in the basic computer skills, digital information resources skills, and internet skills. The findings also revealed that the use of digital information resources by the staff of National Open University of Nigeria (NOUN) in South-South Nigeria was accounted for by their digital literacy level which has resulted to effective administration. Digital literacy of staff have indeed become very important to open and distance learning most especially in accessing up-to-date information irrespective of place, time and space. The following recommendations were made; in the spirit of new awakening kenning by the staff, government should engage more trained personnel and the training and re-training of staff regularly as to enhance their administrative performance. The National Open University of Nigeria study centres should have well equipped staff and the students for effective administration and learning. There should be adequate investment in the digital information facilities, such as computers, the internet, virtual/e-library, mobile, mobile digital devices too much the trends in the globalization of education.

**Keywords:** Digital Literacy, Effective Administration and Open and Distance Learning.

### **INTRODUCTION**

The ability to produce and use knowledge has become a major factor that had enhances the staff effective administration in the open and distance learning in Nigeria universities. In fact, this ability is critical to nation’s comparative advantage, surging demand for education in many parts of the world offers developing countries on invaluable opportunity to prepare a well-trained workforce which can generate growth in a knowledge in driven economy. According to Oyovwe-Tinuoye, *et al* (2016), stated that

proper and reliable communication is prerequisite to effective and efficient use of digital information resources. Quadric and Abomoge, (2013) asserted that the internet is now a means by which the digital divide between the developed and the developing nations is gradually closing up. Mudasiru, (2006) sees open and distance education that deals with the use of print and electric technologies to present individual lessons to learners at a distance. Open and distance learning has become an important policy option for educational planners in developing countries. In the context of Nigeria, increasing population, growing national demand for education dwindling financial resources, increasing fiscal constraints, and therefore narrowing of access to education led to the emergence of National Open University of Nigeria (NOUN) and other open and distance learning system in Nigerian universities. Open and distance learning according to UNESCO, (2002) is the most rapidly growing method in education processes, and its potential impact on all education delivery systems has been greatly accentuated through the development of digital-based information technologies, particularly the world wide web presenting approaches that focus on opening access for effective learning and administrative activities especially in institutions of learning.

According to Emwata and Nwalo, (2013), the use of digital resources has risen to new modes of organizing administrative activities in the institutions of learning and this has introduced a new concept of administrative process. Chandran (nd) carries a study on use and user perception of digital information resources: a case study of Siva Institute of Frontier Technology, India. The study revealed that the type of digital resources used by most staff learning institutions were e-journal and e-data bases, e-books and e-journal articles are used to acquire knowledge and carry out administrative activities. Toyo, (2017) revealed that undergraduates in Delta State University, Abraka, Nigeria made use of digital resources such as e-discussions, e-news, e-journals, CD-Rom, e-books and e-data archives.

All these resources have really, played a very significant role positively to the staff of open and distance learning in Nigeria Universities which has given room for effective leading and administrative activities.

Ajayi, (2014), carried out a study on the influence of digital information resources (DIRs) use on staff digital literacy in Nigeria universities. They found out that the staff use e-journals, e-news, e-books mostly and they often utilize digital information resources (DIRs). The staff also attested to the fact that DIR has improved their reading habit, expanded their administrative capacity and coordination for effectiveness. Tang and Tseng, (2013) carried out a study on distance staff digital literacy library resources and the factors that correlate with staff-seeking self-efficiency in a university in Northeast Alabama. The study revealed that distance education staff who have higher self-efficiency for digital seeking and proficiency in digital manipulation exhibited higher self-efficiency for online administrative activities. This will further demonstrate superior knowledge of digital awareness skills.

Digital literacy according to Jones and Flannigan, (2008) is the multiple formats from wide range of sources when it is presented via computers, a person ability to perform tasks effectively in a digital environment. To be digital literate is to have access to a broad range of practices and cultural resources that you are able to apply to digital tools. This further suggest that digital literacy is the ability to make and share meaning in different modes and formats to create, collaborate and communicate effectively and to understand how and when digital technologies can best be used to support these processes that enhances effective administrative in this 21<sup>st</sup> century.

ALA Digital Literacy Taskforce, (2011) opines that digital literacy is the ability to use information and communication technologies to find, evaluate, create and communicate information requiring both cognitive and technical skills. This further stressed that the digital literacy of staff for effective administrative has significantly added value to the administrative activities in the open and distance learning in Nigeria. Similarly, Omotosho, (2015), that right awareness and attitude of staff will form a forum to develop their digital skills. Therefore, there is the need for teachers and staff to incorporate latest digital learning tools as to enhance better understanding and comprehension leading to effective administration in the various universities and distance learning educational system.

Digital literacy as a global trend, has transformed and rejuvenated universities by making staff more effective, efficient and productive in the administration of various centres of the open and distance

learning. This has increase the training capacity of the various centres and institutions, also offer opportunities in enhancing the articulation between theory and practice and support staff more effectively in becoming effective administrators that is expected.

### **Statement of the Problem**

In view of the fact the digitalized revolution has brought about information technological explosion, the increase in information due to the advancement in technology in open and distance learning activities, staff and students therefore, need to develop skills, especially in digital skills and to have the ability to identify, search, retrieve, evaluate, organize and communicate electronically so as to enhance their administrative and learning coordination and to be able to synergize with their teachers/facilitators to carry out research and other administrative principles and procedures these are most times found out to be majorly lacking in most of the staff in the open and distance learning centres in Nigeria universities. Oyedapo and Ojo, (2013) reasons that could be responsible for this include poor basic knowledge of digital skills as most universities in the country today lack both the personal and the basic facilities or devices. Some of those exposed to basic computer knowledge do not possess the requisite skill that could qualify them as being digital literate.

Proficiency in digital literacy requires the constant use of digital information resources (DIRs) to which many staff lack access. A large proportion of access to digital information resources (DIRs) is still through public information centres which are located mainly in the business areas of major towns only. Staff located in semi-urban and distance areas may not even have access at all. Having personal access to DIRs devices such as i-pad, laptop, modern cones at even a higher cost. Ojениyi and Adetimirin, (2013), the speed of the internet servers in most public information centres is so slow it can discourage a staff in developing digital skills as the low speed increases the time spent. Even for the few open and distance centres with digital learning facilities or devices, inconsistent power supply is a major challenge.

All these linked together could be said to contribute to the observed inadequate digital literacy skills in the open and distance learning. This major lacuna is the gap that this study is set out to fill. The study is particularly important since open and distance learning staff often times make use of digital information resources (DIRs) in showing and presentation of administrative activities. Therefore, this study seeks to investigate the role of digital literacy and the use of digital information resources (DIRs) by the staff of open and distance learning in universities in Nigeria.

### **Purpose of the Study**

The main purpose for the study is to access the role of digital literacy of staff for effective administration in open and distance learning in Nigeria universities. Specially, the study is set out to:

- (1) Ascertain the digital skills of the staff of open and distance learning for effective administration in open and distant learning.
- (2) Ascertain the adequacy of the digital information resources in promoting effective administration.

### **Research Questions**

The following questions are pertinent to the study as they are provided in the collection of relevant data in the field of study:

- (1) How sustainable is the digital skills of the staff in promoting effective administration in open and distant learning?
- (2) How adequate is the digital information resources (DIRs) in promoting effective administration?

### **Hypotheses**

The following hypotheses were formulated and tested at 0.05 level of significance.

1. There is no significant difference between digital literacy of staff and effective administration in the open and distance learning in Nigeria universities.
2. There is no significant difference between digital information resources and effective administration in the open and distance learning in Nigeria universities.

**METHODOLOGY**

The study adopted the description survey design method. Two research questions and two hypotheses were used to guide the study. The sample size of the study was achieved by simple random sampling technique, a sample size of 10 staff from each state centres of the NOUN South-South zone totally sixty (60) selected for the sample size. The instrument used for the data collection was structure questionnaire titled “Role of Digital Literacy of Staff for Effective Administration Questionnaire (RDLSEAQ). The reliability of the instrument was obtained using test retest method: Pearson Product Moment Correlation in calculating a reliability index of 0.81. The instrument was validated by experts in the department of Educational Management and Planning Rivers State University (RSU). The data collected were computed using the weighted mean to answer the research questions and hypotheses were tested with the use of z-statistics at 0.05 level of significance.

**Research question 1:** *How sustainable is the digital skills of the staff in promoting effective administration in open and distance learning in Nigeria universities?*

**Table 1: Perception of staff digital skills in promoting effective administration**

**N = 60**

S/N	Digital skills Items	SA (4)	A (3)	D (2)	SD (1)	Mean	Decision
1	I can copy files from hard disk to store devices and vice versa	61.6	29.9	4.9	4.2	3.48	Agreed
2	I can download and install software on a computer hard disk	55.7	31.5	7.4	5.4	3.37	Agreed
3	I understand the concepts and basic functions of computer system (e.g. DOS, windows)	66.0	28.2	2.5	3.3	3.57	Agreed
<b>Group Mean = 3.49</b>							
<b>Proficiency in using productivity software</b>							
4	I can type a document using word processing software.	72.2	21.5	4.4	1.9	3.64	Agreed
5	I can use excel spreadsheet software to organize information.	42.4	37	13.8	6.9	3.15	Agreed
6	I can use power point software to present information	38.0	33.8	18.2	10.0	3.00	Agreed
<b>Group Mean = 3.26</b>							
<b>Internet Communication Skills</b>							
7	I can handle e-mail programme and compose email mesas using MS outlook, Gmail or yahoo.	63.7	23.6	7.9	4.7	3.46	Agreed
8	I can use web browsers and search effectively.	70.1	19.6	6.3	4.0	3.56	Agreed
9.	I can set up as internet connection and connect to the internet	37.8	35.9	17.3	8.9	3.03	Agreed
<b>Group Mean= 3.35</b>							

**Source:** Field Survey, 2021

**Table 1:** reveals that respondents rated themselves highly in digital skills (Grand  $\bar{X} = 3.38$ ). The respondents possessed basic digital skills (Grand  $\bar{X} = 3.35$ ). Proficient in using productivity software ( $\bar{X} = 3.26$ ). Another is the internet communication skills  $\bar{X} = 3.35$ . This means that the staff can use internet reasonable extent. They can use web browser and participate in conferencing. Respondents proficiency in using productivity software was rated high but had the lowest group mean of 3.26, ability to type using word processor had the highest mean  $\bar{X} = 3.64$ , followed by their ability to sue excel spreadsheet  $\bar{X} = 3.15$  and power point software  $\bar{X} = 3.00$  for presentations. The grand mean for the possession of digital skills 3.38. This is an indication that the students even though fared well in using productivity software there is still room for improvement through training and retraining of staff for effective administrative use of these software.

**Research Question 2:** *How effective is the digital information resources process as regards to the digital literacy of the staff in meeting the need for effective administration?*

**Table 2: Perception of staff as regards to effective use of digital resources as regards to effective administration**

S/N	Purpose	SA (4)	A (3)	D (2)	SD (1)	Mean	Decision
10	Teaching/administrative	69.9	23.5	1.8	4.9	3.58	Agreed
11	Project/research	62.2	27.5	2.5	3.9	3.56	Agreed
12	Collaboration and communication	54.3	32.9	6.8	6.0	3.36	Agreed
13	I can use power point software to present information	38.0	33.8	18.2	10.0	3.00	Agreed
<b>Group Mean</b>		<b>3.50</b>					

**Source:** Field Survey, 2021

**Table 2:** Reveals that the respondents use digital information resources for various administrative purposes.

The respondents use digital information resources (DIRs) more for the purpose of administrative and teaching assignment with mean ( $\bar{X} = 3.58$ ). This is followed by research for the purpose of collaboration and communication with mean scores of 3.56, and 3.36 respectively. The grand mean of the purpose of the use of DIR by the respondents was 3.50. It was therefore follows that the staff use of devices for all administrative work, research information, collaboration and communication.

**Hypothesis 1**

H<sub>01</sub>: There is no significant difference between digital literacy of staff and effective administration in the open and distance learning in Nigeria universities.

**Table 3: z-test analysis of male and female staff perceived digital skills as tool for effective administration in open and distance learning in Nigeria universities.**

Gender	N	X	SD	DF	t-cal	t-critical	Decision
Male	30	2.46	0.32				
				3.28	2.692	1.960	Rejected
Female	30	2.52	0.36	6.0	3.36		Agreed

**Source:** Field Survey, 2021

From the above, t-calculated, 2.692 is greater than the value of t-table which is 1.960. Therefore, the null hypothesis which states that there is no significant difference between male and female staff perceived effective administration in open and distance learning is rejected.

**Hypothesis 2**

H<sub>02</sub>: There is significant difference between digital information resources and effective administration in the open and distance learning in Nigeria universities.

**Table 4: z-test analysis of female and male staff perceived on digital information resources process and its effectiveness in administration in open and distance learning in Nigeria universities.**

Gender	N	$\bar{X}$	SD	DF	t-cal	t-critical	Decision
Male	30	2.484	0.424	3.28	2.523	1.960	Rejected
Female	30	2.312	0.533				

**Source:** Field Survey, 2021

From the Table 4 above, the value of t-cal., 2.523 is greater than t-table value 1.960. Therefore, the null hypothesis which states that is no significant difference between the male and female staff perceived as regards to digital information resources process and its effectiveness on the administration in open and distance learning.

**DISCUSSION OF FINDINGS**

The findings on the digital literacy of staff of open and distance learning revealed that the respondents are highly literate in digital devices they rated themselves high the basic computer skills, digital information resources skills, and internet skills. This finding corroborates those of Omotosho, et al., 2015; Obasuyi, 2015, Topologlu and Tekkanate, 2014 and Buarki and Iran Murray, 2011) which revealed that staff have the basic computer skills and possess internet searching skills. The finding also agrees with the study by (Liebenberg, Chetty, and Prinsloo, 2012; Ojeniyi and Adetimirin, 2013; Hamutunwa, 2003 and Odede and Odede, 2016) which revealed that majority of the staff are highly skilled in use of digital and its applications. Though this result is somehow high yet there is still need for staff to develop this skill as it is highly needed in administrative presentations. Dutton (1990) cited in Ozoemelem (2009) opined that the skills required to maximize the potential of digital devices are much greater than those required for search printed sources. The implication is that conscious effort should be made by staff of open and distance learning as well as by the universities to ensure the acquisition of required skills for learning in digital environment.

The finding on the purpose of digital information resources by the staff indicates that the respondents use the e-resources for the purpose of carrying out research and assignment, and also for collaboration and communication to a large extent.

The findings also revealed that the use of digital information resource by the staff of NOUN in south-south Nigeria was accounted for by their digital literacy which has resulted to effective administration.

**CONCLUSION**

Digital literacy of staff have indeed become very important to open and distance learning most especially in accessing up-to-date information as the give access to quality information irrespective of place, time and space. However, there cannot be effective use of digital devices or resources without staff possession of digital skills. Consequently, this study has revealed that staff in NOUN South-South Nigeria are highly skilled in digital information resources as a result their digital literacy level has reflected to the effective administration by exhibiting their literate capacity in digital resource. In spite of the great benefits digital information resources hold for the staff and researchers, erratic power supply, poor internet connectivity

and financial constraint are impediments to their effective use for administration purpose in the open and distance learning in Nigeria universities.

### RECOMMENDATIONS

The following recommendations were made in line with the findings of the study:

1. The National Open University of Nigeria study centres, should have well equipped information resource centres to benefit the staff and the students for effective administration and learning.
2. There should be adequate investment in the digital information facilities such as computers, the internet, virtual/e-library, mobile digital devices to match the trends in the globalization of education.
3. The staff of open and distance learning should upgrade their knowledge and skills in digital and should make effective use of information resources available.
4. The federal government of Nigeria should formulate policy that will facilitate the adoption and effective use of digital information resources by staff in the higher education of learning.

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