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Utilisation of Library Electronic Resources and Academic Performance of Distance Learning Students in Universities in the South-West, Nigeria

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Abstract

The study investigated how utilisation of library electronic resources influenced the academic performance of distance learning students in universities in the South-west, Nigeria. A descriptive research method of ex-post facto was used. Eight-hundred and sixty seven respondents were selected through the use of purposive multi stage sampling technique. Five research questions and a null-hypothesis were raised. Questionnaire was used to garner information from the sampled respondents. The questionnaire was face and content validated. It yielded reliability coefficient of 0.75. Data were analyzed using descriptive statistics. Inferential statistics like multiple regression analysis and Pearson product moment correlation were used to test the hypothesis at 0.05 level of significance. The results show that abstracting and indexing databases were the most frequently used library electronic resources (Mean = 3.30, S.D=.71). 397 (45.8%) of the respondents are in the low performance group while 470 (54.2%) of the respondents are in the high performance group. There is a significant relationship between the utilisation of library electronic resources and academic performance of distance learning students in universities in the South-west, Nigeria (r = .430**, N= 867, P < .01). The major problem being encountered by students is lack of enough time to use library resources. It was recommended that University libraries should improve on electronic resources collections and make them accessible without necessarily visiting the libraries.

Keywords: *Utilisation, Electronic resources, Academic performance, Distance learning students*

1.1 Introduction

The advent of information technology has made it possible for libraries generally and academic libraries in particular to acquire, organise, store and disseminate information technology related learning materials. In essence, libraries play a significant role of providing some of the reading materials to support distance education programmes throughout the world. University libraries adopt the use of Information and Communication Technology (ICT) for their library operations because of the numerous benefits that are derivable from it. In the

opinion of Okello-Obura and Magara (2008), users derive a lot of benefits from electronic resources, by having access to wider varieties of information, thereby recording improved academic performance as a result of access to quality information. Electronic resources have become an integral part of libraries' resources at various higher institutions and are expected to be used by university students in pursuance of their various academic degrees. Library electronic resources consist of all resources in electronic form in the university libraries' collections. The resources include databases, electronic serials, digital documents, e-books, e-journals, CD-ROMs and free Internet collections that have been catalogued by the library in its OPAC. The facility has increased the variety of resources available to students which can be accessed anytime and everywhere.

1.2 Objectives of the study: the objectives of the study are to:

i)   identify the frequency of use of library electronic resources by distance learning students in university libraries in the South-west, Nigeria;

ii)   find out the library electronic resources most frequently used by distance learning students;

iii)   find out which of the institutions use electronic resources most among the studied universities;

iv)   find out the level of academic performance of distance learning students in selected universities in the South-west, Nigeria and

v)   find out challenges being encountered by distance learning students while accessing and using library electronic resources in university libraries in the South-west, Nigeria.

1.3 Research Questions:
The following research questions were used to

guide the study:

i)   What is the frequency of use of library electronic resources by distance learning students in university libraries in the South-west, Nigeria?

ii)   Which of the library electronic resources is most frequently used by distance learning students in university libraries in the South-west, Nigeria?

iii)   Which institution used library electronic resources most among the studied institutions?

iv)   What is the level of academic performance of distance learning students in universities in the South-west, Nigeria?

v)   What are the challenges encountered by distance learners in accessing and using library electronic resources in university libraries in the South-west, Nigeria?

1.4 Hypothesis
A null-hypothesis was tested in the study at 0.05 level of significance
Hol: There is no significant relationship between the utilisation of library electronic resources and academic performance of distance learning students in universities in the South-west, Nigeria.

2.1 Review of Related Literature
        Some universities in Nigeria of recent have keyed into the idea of widening access to higher education through the open distance learning programme. Distance learning programme has become part of the recognised channels through which working class people could improve their status by acquisition of degrees and diplomas considered relevant to attaining higher status. In the quest of students to acquire additional qualification, library has a role to play since it is the agency saddled with the responsibility of acquiring relevant library resources and making such materials

available to would be users of the library. Visiting and utilising library resources are considered part of routine of an average full time degree student, this however is not always the case with distance learning students who do not devote their entire time to study and yet are desirous of having good grades.

Some researchers have looked into relationship that exists, if any, between learners' performance and use of library resources. For instance, Margie and Brian (2010) in their study on measuring the value of library resources and student academic performance reported that, 'students who borrow library resources, do outperform students who do not". There is a gap of 12 credit points between non –library users and strong library users based on their findings. Similarly, Brian and Margie (2012) looked into the relationship between University of Wollongong Library (UWL) resource usage and student performance. The finding revealed a strong correlation between the use of University of Wollongong Library (UWL) information resources and student grades. According to the researchers, the average mark for students who never used UWL electronic resources in 2011 was 55. The average mark for students who spent up to an hour a year accessing UWL electronic resources was 61. Thus, according to their findings, students who access library resources do outperform students who don't.

A similar study conducted by Salaam and Adegboore (2010) concluded that the use of library affects students' academic performance. They declared that students who use the library regularly were found to perform better academically (i.e. scored more than six grade A) while the majority of the students who visited the library occasionally performed averagely (never scored above grade C). Besides, 13.3% of those who did not visit at all were found to have performed poorly in their academics. They concluded

that the more frequent the visit to the library, the better the academic performance of the students and vice versa.

Similarly, Mabawonku (2004) in her study of Library Use in Distance Learning: a survey of undergraduates in three Nigerian universities found that most distance learners studied (57.5%) went to the library "to read my books". To borrow library materials just 27.1% went there for that purpose while 25.7% respondents indicated that they had used reference materials before and these were mostly the dictionary and the encyclopedia. Three hundred and seventeen students (85.9%) and three hundred and twenty students (86.7%) had never used the CD- ROM and the microfilms in libraries.

There is enough evidence to show that some universities that provide distance learning services have equally made substantial provisions for electronic resources. In order to ease the burden of distance learners, provisions are made for them in the libraries to have access to the available resources so that their inability to visit the library does not become an inhibition to performing well in their studies. The University of South Africa (UNISA) is one of the foremost distance learning universities in the world which has the latest IT and resources in its library. These resources include a large stock of books of a million, many journal titles, numerous microfilms, CDROMs and video and audio recordings. There are networks of many databases and bibliographic services that the students could also access (Oladokun, 2002).

Some universities in the South-west, Nigeria like Universities of Lagos and Ibadan have been providing consistent distance learning programmes for quite some time now. These first generation universities could boast of having well stocked libraries both in print and electronic formats. This study therefore, investigated the effect of use of electronic resources on the academic

performance of distance learning students in selected universities in the South-west, geo-political zone of Nigeria.

3.1 Research Methodology

The design adopted for the study is the descriptive survey of ex-post facto type. The researcher observed the variables of the study in their natural occurrence. The study adopted this approach because the independent variable (utilisation of library electronic resources) had already existed and no attempt was made in the study to control or manipulate it.

The population of the study was all distance learning students in federal universities in the South-west, Nigeria. The total population of the study is 29,940. The multi-stage sampling technique was adopted for the study to select three (3) universities (UI, UniLag & OAU). Out of the total population, 1,497 representing 5% of the sample was used. Four research instruments: self-designed questionnaires, interview, observation and students transcripts were used for this study.

Data collected were analysed using descriptive statistics which include frequency counts, percentages, mean and standard deviation. Inferential statistics like multiple regression analysis and Pearson product moment correlation were used to test the hypothesis of the study at 0.05 level of significance.

4.1 Results and Analysis of Findings

A total of one thousand five hundred (1,500) copies of the questionnaire were administered to distance learning students one thousand one hundred and thirty (1,130) questionnaires were retrieved while four copies of the total questionnaire were distributed to the Readers Services Librarians in the four selected universities. The results of the data collected are hereby stated as thus:

Research question 1: What is the frequency of use of library electronic resources by distance
learning students in university libraries in the South-west, Nigeria?

Table 1: Distribution of library electronic resources by frequency of use

S\N	Library Electronic Resources	Never	Sometimes	Often	Very often	Mean	S.D
1	Abstracting and indexing databases	320(36.9%)	274 (31.6%)	197 (22.7%)	76(8.8%)	3.30	.71
2	E-documents	181(20.9%)	235(27.1%)	298 (34.4%)	153(17.6%)	1.96	1.03
3	Hand books	280(32.3%)	221(25.5%)	199(23.0%)	167(19.3%)	1.77	1.10
4	Electronic newspapers and magazines	272 (31.4%)	215(24.8%)	219 (25.3%)	161 (18.6%)	1.73	1.04
5	Digital documents	281(32.4%)	270(31.1%)	232(26.8%)	84(9.7%)	1.49	1.01
6	Dictionaries	144(16.6%)	179(20.6%)	307(35.4%)	237(27.3%)	1.33	1.06

7	Reports (annual, technical, feasibility & working papers)	376(43.4%)	262(30.2%)	164(18.9%)	65(7.5%)	1.31	1.10
8	Directories	263(30.3%)	233(26.9%)	257(29.6%)	114(13.1%)	1.29	1.11
9	Internet- (news group, listservs & e-mail)	166(19.1%)	149(17.2%)	270(31.1%)	282(32.5%)	1.27	1.04
10	Encyclopedias	248(28.6%)	225(26.0%)	254(29.3%)	140(16.1%)	1.26	1.03
11	Electronic serials	305(35.2%)	252(29.1%)	235(27.1%)	75(8.7%)	1.14	.98
12	CD-ROMs	310(35.8%)	288(33.2%)	187(21.6%)	82(9.5%)	1.13	.91
13	Electronic databases	263(30.3%)	232(26.8%)	248(28.6%)	124(14.3%)	1.09	.98
14	E-journals	245(28.3%)	327(37.7%)	231(26.6%)	64(7.4%)	1.08	1.00
15	Internet	111(12.8%)	147(17.0%)	278(32.1%)	331(38.2%)	1.03	.97
16	Bibliographies	317(36.6%)	245(28.3%)	223(25.7%)	82(9.5%)	1.01	.97
17	Electronics abstracts	347(40.0%)	221(25.5%)	245(28.3%)	54(6.2%)	.95	.97
18	Electronic indexes	371(42.8%)	231(26.6%)	202(23.3%)	63(7.3%)	.91	.96

Table 1 indicates library electronic resources by frequency of use. It shows the ranking of the frequency of use of library electronic resources by distance learning students in university libraries in South-west, Nigeria. Abstracting and indexing da tabases (Mean =3.30, S.D=.71) was ranked highest by its mean score rating as the most frequently used library electronic resources. Library electronic resources used mostly by distance learning students in university libraries in South-west, Nigeria are databases.

Research question 3: Which institution use library electronic resources most among the studied institutions?

Table 2: Rating of use of electronic resources by institutions used in the study

Institutions	Academic Performance		Use of Library Electronic Resources	
	Mean	S.D.	Mean	S.D.
NOUN	59.40	5.62	52.46	16.76
U.I.	58.75	6.91	52.29	1656
UNILAG	56.55	5.32	51.10	1192
O.A.U.	58.69	6.53	53.50	15.50
Total	58.19	6.11	52.20	15.02

As shown in Table 2, respondents from Obafemi Awolowo University (OAU) w ere rated highest in the use of library electronic resources with the mean score of 53.50 while those from NOUN with the mean score of 52.46 were rated next. UI respondents with the mean score of 52.29 were rated third while UNILAG respondents with the mea n score of 51.10 were rated the least. There is a significant relationship between the use of library electronic resources and academic performance of distance learning students in universities in the South -west, Nigeria (r = .860**, N= 867, P < .01). The finding agrees with Tella, Tella, Ayeni and Omoba's (2007) findings that the respondents' use of electronic information actually has greater influence on their academic performance.

Research question 4: What is the level of academic performance of distance learning students in universities in the South-west, Nigeria?

Table 3: **Academic performance of distance learning students in universities in the South-west, Nigeria**

Academic Performance	Mean	Std. Dev.	N
Low Performance	52.7783	2.7782	397
High Performance	62.7596	4.0749	470
Total	58.1892	6.1058	867

Table 3 shows the academic performance of distance learning students in universities in the South -west, Nigeria **.** It shows that 397 (45.8%) of the respondents are in the low performance group with a mean s core of 52.7783 and a standard deviation score of 2.7782 while 470 (54.2%) of the respondents are in the high Performance group with a mean score of 62.7596 and a standard deviation of 4.0749 respectively. It can be deduced from the table that the academic performance of distance learning students in South -west Nigerian universities is high despite the restricted access to library resources. It could be inferred that distance learning students' source information outside the university libraries. External u sage of electronic resources might be responsible for the high academic performance of distance learning students.

Research question 5: What are the constraints being encountered in accessing library electronic resources by distance learning students in universities in the South-west, Nigeria?

Table 4: constraints encountered in the use of library electronic resources by distance learning students

Constraints to the use of electronic library resources	Frequency	Percentage
Inadequate library opening hours	204	23.5
Lack of time to visit the library due…	402	46.4
Incessant power outages	91	10.5
Lack of distance learning library ser...	103	11.9
Lack of library use skill	57	6.6
Others	10	1.2

N=867

Table 4 shows the various constraints being encountered in accessing library electronic resources by distance learning students in universities in the South-west, Nigeria. Lack of time to visit the library ranked highest among the constraints encountered by the learners.

Hypothesis 1: There is no significant relationship between the use of library electronic resources and academic performance of distance learning students in universities in the South- west, Nigeria.

Table 5: Relationship between the use of library electronic resources and academic performance of distance learning students in universities in the South-West, Nigeria

Variable	Mean	Std. Dev.	N	R	P	Remark
Use of Electronic Library Resources Academic Performance	52.1949 58.1892	15.0172 6.1058	867	. 860**	. 000	Sig.

** Sig at .01 level

Table 5shows the relationship between the use of library electronic resources and academic performance of distance learning students in universities in the South -west, Nigeria .It is shown in Table 9 that there is a significant relationship be tween the use of library electronic resources and academic performance of distance learning students in universities in the South - west, Nigeria (r = .860**, N= 867, P < .01). Hence, the use of library electronic resources influenced academic performance of distance learning students in universities in the South -west, Nigeria. Therefore, the null hypothesis is rejected.

5.1 Discussion of Findings

Most of the respondents accessed library electronic resources through internet browsing 374 representing 43.1% of the total respondents. The finding agrees with that of Tellaet. al. (2007) finding that the electronic information source students use most often to search for information is internet with 248 respondents (35.42%). This was closely followed by 299(34.5%) of the respondents who claimed that they accessed library resources through book browsing on the shelves. It is implied that both e-resources and printed resources were made use of, in 'parri-passu' in the selected university libraries. This is an indication that it would take some time for university libraries to become paperless in

Nigeria. This finding is in agreement with the findings of Oladokun and Aina (2009) in their study of "library and information needs: barriers to the use of information sources by continuing education students at the University of Botswana" they found that the most preferred information format out of the three (3) options of print, electronic and audio-visual provided is print format. Many of the respondents 71% had a preference for print format. Only 15% preferred electronic formats and 14% audio visual formats.

Abstracting and indexing databases are the most frequently used library electronic resources by the distance learning students while electronic indexes are the least frequently used library electronic resources.

This agrees with Hughes (2005) who examined the use of online information resources by a group of international students at Queensland University when using the library. He found that the participants made extensive use of the internet and moderate use of common journal databases like Proquest, Emerald and Infotrac but very limited use of specialist information sources. This finding is at variance with that of Ray and Day (1998) whose findings revealed that the most popular electronic resources were CDROMs and the Internet with 80.7% and 76.7% respectively, of the respondents using them. Equally Majid's and Abazova's (1999) findings showed that their respondents used the internet more frequently than other resources while Okrent's (2001) findings reflected that students made little use of materials in full-text electronic form.

Library databases are mostly used by distance learning students with the mean of 3.24. This finding is in consonance with Idowu and Mabawonku (1999) that eighteen (18) of the surveyed libraries had CD-ROM facilities installed for use, and that of all the bibliographic databases available on CD-ROM, AGRICOLA was the most used.

Lack of time to visit the library due to the nature of the course 402 (46.4%) was ranked highest by the respondents. This finding is in consonance with Adesoye's and Amusa's (2011) finding that lack of time due to intensive nature of the programme by the respondents responses is an impediment to utilisation of library resources and facilities. This was closely followed by inadequate library opening hours as a constraint to the use of library electronic resources. Incessant power outages 91 (10.5%), lack of distance learning library services coordinator to oversee distance learners 103 (11.9%), lack of library use skill 57 (6.6%) respectively constituted constraints to their use of library electronic resources while 10(1.2%)

respondents attributed other reasons as their constraints. This finding contradicts that of Oduwole's and Akpati's (2003) who identified insufficient number of terminals available for use despite high demand and inadequate electricity supply. Equally, it contradicts Abdullahi's and Haruna's (2008) findings that lack of basic knowledge of ICT is the second major constraint after the problem of erratic power supply to the use of ICT in the university libraries in Adamawa State, Nigeria.

The surveyed university libraries have abundant holdings of electronic resources. This finding tallies with Idowu and Mabawonku (1999) in their study of information technology facilities and applications in some Nigerian research and university libraries, that the surveyed libraries have modern technologies in their holdings. Equally, Shaqour and Daher's (2010) findings indicated that the academic institutes provide moderate level of electronic resources. It was found that distance learning students used the internet for checking E-mail. This finding corroborates Ojedokun and Owolabi (2003) and Ojoko and Asaolu (2005) findings in their studies that e-mail is the most commonly used internet facility for individual and group academic collaboration.

Conclusion and Recommendations
The importance of library electronic resources for distance learning in the universities cannot be overemphasized. Three universities in the South-West Nigeria were sampled in this study. Distance learning students were exposed to library basic instructions. Use of library electronic resources by distance learning students is facilitated through user education and handbook. The resources mostly used by distance learning students were books, journals, electronic databases and the Internet. Electricity supply is an important

infrastructure in the provision and use of library electronic resources. It was observed that all the university libraries used in the study had provision for alternative electricity supply through the use of sources like inverter and generating set in case of power outages.

The following recommendations were made vis-à-vis the findings of the study:

(1) University librarians should effectively re-engineer the university libraries to meet the demands of a digital era distance learning users. This could be done by providing them with appropriate access code that would enable them, use of library electronic resources in their homes or offices.

(2) University libraries should strive to update their ICT facilities. The number of users and available computers should inform the bandwidth subscription rate. Provision should also be made for training and retraining of both staffers and library users in the use of ICT in searching for information.

(3) Since the use of library electronic resources is now popular, the resources should be made available and accessible to distance learning students by issuing them password to access them, so that the huge amount of money expended on the acquisition of e-resources will be justified and invariably positively affect the academic performance of distance learning students.

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