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Availability and accessibility of e-resources in academic libraries in Nigeria: the impact of the interventionist programmes

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The impact of e-resources and the accompanying infrastructural development has not been fully realized in most developing countries necessitating some interventionist programmes. This study was undertaken to assess the impact of donor agencies in interventionist programmes with regards to the availability and accessibility of e-resources in Nigerian Federal University of Ibadan (UI) and Obafemi Awolowo University (OAU). A structured questionnaire was adopted for data collection. A total of 480 lecturers were involved in the study with 240 per institution, 80 from each of the three Faculties per institution and 20 lecturers from each of the four departments per faculty. Frequency counts on availability of e-resources were subjected to Analysis of Variance and Duncan's Multiple Range Test while frequency counts on accessibility of e-resources were subjected to percentages. Results indicated that AGORA, HINARI and JSTOR were popular and also that the percentage of accessibility of these e-resources was 98.2, 98.2 and 96.4 for the Faculties of Agriculture, Science and Social Sciences, respectively in UI and 100% in each of the three Faculties in OAU. AGORA, HINARI, and JSTOR are members of the interventionist group and being significantly more available than the other resources is a strong indication that the interventionist programmes have had a positive impact on the e-resources users in Nigeria.

Keywords: E-resources; University libraries, Interventionist programmes; Nigeria

Introduction

The revolution of Information and Communication Technology (ICT) has greatly enhanced access to information resources and has further strengthened the knowledge economy, leading to the concept of global village. One of the major offshoots of this development is the emergence of electronic information resources in which distance is no longer a barrier. In the developed countries, information is easily accessible. In the developing countries, not much has been achieved regarding easy access to current information. Also, the expected impact of e-resources usage and the accompanying ICT infrastructural development have not been fully realized.

In order to bridge this gap of digital divide between developed and less developed countries, some donor agencies initiated programmes in 2002 to increase access to information and library development to assist researchers. In this regard, Research4life was formed by four programmes, HINARI, AGORA, OARE and ARDI which provide access to the developing countries with free or low cost peer-reviewed content online[1].

Research4life is a public-private partnership including World Health Organisation (WHO), Food and Agriculture Organisation of United Nations (FAO), United Nations Environment Programme (UNEP), Cornell and Yale Universities made up of over 195 scientific, technical and medical publishers with Microsoft as the technical partner[1]. The objective of the initiative is to level the playing field in access to scientific scholarship in low-income countries, so that they are better equipped to solve their own problems in those sectors, leading to more likely achievement of the United Nations Millennium

Development Goals (MDGs), more equitable participation in global research fora, and South-North and South-South collaboration[2]. Other objectives were to enhance researchers' access to current and relevant information leading to improved teaching and research work, facilitate collaborative research and exchange of ideas with colleagues in the developed nations, share experiences and best practices, maintain standard of research work and keeping abreast with new development in one's area of interest. These objectives are to be achieved through the provision of low cost access to academic and professional peer-reviewed content on-line, creating awareness about the availability and utilization of e-resources in various university libraries, the provision of necessary facilities by institutions such as hardware and software, internet connectivity with appropriate bandwidth, constant power supply, technical experts to mount the systems, and establishing training laboratories.

Overall, the interventionist programmes have produced some positive impact on research activities of the users. It has been noted that researchers and librarians perceived access to e-journals in HINARI and AGORA as one of the most valuable resource at their disposal and strongly urged that the programmes be continued and expanded[3]. Other interventionist programmes also include improvements in university curricula, the accreditation of advanced-degree programmes, the development of national policies, and in the case of HINARI, enabling the introduction of evidence-based medical interventions and policy implementation in Africa[3].

Nigerian universities lacked the requisite ICT infrastructures needed for effective running of these programmes. Consequently, the Association of Vice-Chancellors of Nigerian Universities (AVCNU) organized a workshop in 2008 on the strategy for the development of ICT and affordable bandwidth for universities and research institutions. Thus, AVCNU established the National Research Education Network (NREN) with the responsibility of developing an ICT infrastructure for effective access to e-resources[4]. The AVCNU identified the importance of ICT to include supporting the development and sharing of online information, supporting collaborative research among national and international universities and research institutes, and sharing of experiences and best practices among scholars[4]. The outcome of the workshop led to the establishment of ICT forum of the universities with the mandate to develop ICT infrastructures in the various universities[4]. The impact of these interventionist programmes in Nigerian Universities needs to be assessed since there is a dearth of information on the issue.

Objective of the study

To assess the impact of donor agencies interventionist programmes with regards to the availability and accessibility of e-resources in two Nigerian Universities.

Methodology

The population of the study comprised 480 lecturers in two federal universities in Nigeria – University of Ibadan and Obafemi Awolowo University. A total of 240 respondents were drawn from each of the two institutions. Three faculties were randomly selected from one university and the same faculties were selected from the second. Four departments in each of the selected faculties were involved in the study. Twenty respondents were sampled from each department giving a total of 80 respondents per faculty.

An 11-item structured questionnaire was used for data collection. The questionnaire asked the respondents' opinion regarding the availability of 12 e-resources platforms and accessibility of the e-resources therein.

The questionnaire was administered to the respondents in each of the departments studied and completed questionnaire was collected for data analysis, which was based on 70% correctly completed questionnaire. Frequency counts on the availability of e-resources were subjected to Analysis of Variance and Duncan's Multiple Range Test while frequency counts on accessibility of e-resources were subjected to percentages.

Analysis

Analysis of Variance indicated that there were significant differences in the level of awareness of availability of the 12 e-resources platforms studied. In the Faculty of Agriculture, University of Ibadan, Duncan's Multiple Range Test indicated that respondents were significantly ($p \leq 0.05$) more aware

of the availability of AGORA with a mean frequency count of 13.50, followed by JSTOR with a mean frequency count of 13.25 (Table 1). Also, National Virtual Library and Ebscohost databases showed similar level of awareness of availability with the mean score of 11.75 and 11.25, respectively. Thus, apart from AGORA, JSTOR, National Virtual Library and EBSCOHOST, the rest of the e-resources platforms listed in terms of awareness of availability recorded very low mean frequency counts (Table 1).

In the Faculty of Science in the same institution, the same analysis revealed that there was no significant difference in the level of awareness of the availability of HINARI, JSTOR, and AGORA databases among the respondents, with mean frequency counts of 13.75, 13.75 and 13.25, respectively. The rest of the e-resources platforms recorded very low mean scores with ODS recording the least (0.25). In the Faculty of Social Sciences, there was significant difference between the level of awareness of availability for JSTOR with a frequency count of 13.50 than the rest of the databases with Oare being the least with a frequency count of 3.25 (Table 1).

In the Faculty of Agriculture, Obafemi Awolowo University, there was significant difference between the level of awareness of the availability of JSTOR than the rest of the databases. Thus, JSTOR had a highest frequency count of 13.50, followed by AGORA with 11.75 and HINARI with 10.50, while OBSERVATORY recorded the least count of 1.00 (Table 2). In the Faculty of Science, the analysis revealed that there was no significant difference between the level of awareness of availability among AGORA, JSTOR and HINARI. This means that for AGORA, JSTOR and HINARI, the level of the awareness of their availability are about the same with frequency counts of 13.00, 12.00, 11.50, respectively (Table 2). The least of the 12 databases was ALUKA with count of 1.00. In the Faculty of Social Science, the analysis of the result revealed that there was a significant difference between the level of awareness

Table 1—Awareness of availability of e-resources databases in University of Ibadan, Nigeria

Faculties					
Agriculture		Science		Social Sciences	
*Databases	**Mean Frequency Count ± SE.	Databases	Mean Frequency Count ± SE.	Databases	Mean Frequency Count ± SE.
Agora	13.50 ± 0.29 a	Hinari	13.75 ± 0.25 a	Jstor	13.50 ± 0.29 a
Jstor	13.25 ± 0.25 a	Jstor	13.75 ± 0.25 a	African Virtual National	8.00 ± 1.08 b
National Virtual Library	11.75 ± 0.95 ab	Agora	13.25 ± 0.25 a	Hinari	6.00 ± 1.29bc
Ebscohost	11.25 ± 1.03 ab	Bio-One	10.25 ± 0.63 b	Bio-One	4.00 ± 0.71 cd
Hinari	10.75 ± 1.18 b	Ebscohost	6.25 ± 1.89 c	Agora	3.75 ± 0.75 d
Bio-One	8.25 ± 0.48 c	National Virtual Library	6.00 ± 1.68 c	National Virtual Library	3.50 ± 0.50 d
Oare	4.50 ± 1.66 d	Oare	5.50 ± 1.26 c	Aluka	3.25 ± 0.65 d
ODS	2.00 ± 0.41 e	African Virtual National	4.75 ± 0.85 c	Ebrary	3.25 ± 0.63 d
Ebrary	1.25 ± 0.95 e	Aluka	4.50 ± 0.50 cd	The observatory	3.25 ± 0.63 d
African Virtual University	0.50 ± 0.29 e	The Observatory	2.00 ± 0.00 de	ODS	3.25 ± 0.63 d
Aluka	0.50 ± 0.29 e	Ebrary	1.75 ± 0.25 e	Ebscohost	3.25 ± 0.63 d
The Observatory	0.00 ± 0.00 e	ODS	0.25 ± 0.25 e	Oare	3.25 ± 0.63 d

*n= 56 per database per Faculty. **Means in the same column followed by the same letters are not significantly different (P≤0.05, Duncans' Multiple Range Test)

Table 2—Awareness of availability of e-resources databases in Obafemi Awolowo University, Nigeria

Faculties					
Agriculture		Science		Social Sciences	
*Databases	**Mean Frequency Count for availability ± S.E.	Databases	Mean Frequency Count for availability ± S.E.	Databases	Mean Frequency Count for availability ± S.E.
Jstor	13.50 ± 0.58 a	Agora	13.00 ± 0.41 a	Jstor	14.00 ± 0.00 a
Agora	11.75 ± 0.75 ab	Jstor	12.00 ± 1.35 a	Agora	11.00 ± 0.71 b
Hinari	10.50 ± 1.29 b	Hinari	11.50 ± 1.65 a	Hinari	10.50 ± 1.19 bc
Bio-One	7.25 ± 1.11 c	National Virtual Library	8.75 ± 1.03 b	Bio-One	8.50 ± 0.89 c
National Virtual Library	6.75 ± 0.48 cd	Bio-One	8.50 ± 1.19 b	National Virtual Library	5.75 ± 0.75 d
ODS	5.00 ± 0.91 cde	Ebscohost	5.50 ± 0.87 c	ODS	4.50 ± 1.26 de
Ebscohost	4.25 ± 1.31 def	ODS	4.00 ± 0.71 cd	Ebscohost	2.75 ± 0.48 ef
Oare	4.00 ± 1.08 ef	Ebrary	3.75 ± 1.49 cde	Ebrary	2.50 ± 1.04 ef
Ebrary	3.00 ± 1.08 efg	Oare	3.00 ± 0.41 cde	Oare	1.75 ± 0.75 f
Aluka	3.00 ± 0.71 efg	African Virtual University	2.25 ± 1.03 de	The Observatory	1.50 ± 0.50 f
African Virtual University	1.50 ± 0.87 fg	The Observatory	1.50 ± 0.50 de	Aluka	1.50 ± 0.87 f
The Observatory	1.00 ± 0.71 g	Aluka	1.00 ± 0.41 e	African Virtual University	1.25 ± 0.48 f

*n= 56 per e-resources platform per Faculty. **Means in the same column followed by the same letters are not significantly different (P≤0.05, Duncans' Multiple Range Test).

Table 3—Frequency of accessibility of e-resources databases in the University of Ibadan, Nigeria.

Items		Faculties					
		Agriculture		Science		Social Science	
		*f	%	F	%	f	%
Accessibility	Yes	55	98.2	55	98.2	54	96.4
	No	1	01.8	1	01.8	2	03.6

of availability for JSTOR and the rest of the databases, with the mean frequency count 14.0. This was followed by AGORA and HINARI with counts of 11.00 and 10.50, respectively.

Thus, out of the 12 e-resources platforms studied, respondents were significantly more aware of the availability of AGORA, HINARI and JSTOR in the two institutions. Among these three databases, JSTOR was the most frequent, being ranked alone or in combination with AGORA and/or HINARI as the most significantly available platform(s) in each of the six faculties. AGORA was ranked in four while HINARI was ranked in two of the six faculties.

In the University of Ibadan, the frequency count for accessibility of e-resources in the Faculties of Agriculture, Science and Social Sciences was 55 (98.2%), 55 (98.2%) and 54 (96.4%), respectively (Table 3).

In Obafemi Awolowo University, the frequency count for accessibility in each of the Faculties was 56 (100%) (Table 4).

In the two institutions studied, results indicated that e-resources were readily accessible. The result of this study indicated that the interventionist programmes have impacted positively on the users as shown by the fact that the respondents were significantly more aware of the availability of AGORA, HINARI and JSTOR compared with the other nine e-resources platforms studied. These three platforms are members of Research4life group. HINARI was launched in

Table 4—Frequency of accessibility of e-resource databases in Obafemi Awolowo University, Nigeria

Items		Faculties					
		Agriculture		Science		Social Science	
		*f	%	F	%	f	%
Accessibility	Yes	56	100	56	100	56	100
	No	-	-	-	-	-	-

2002, AGORA in 2003, OARE in 2006 and ARDI joined in 2010[5]. JSTOR was included in 2012[6]. Users and librarians have perceived access to e-journals in HINARI and AGORA as one of the most valuable resources at their disposal and strongly urged that the programmes be continued and expanded[3]. As a result, the HINARI-AGORA partners agreed at their annual meeting in 2006 to extend HINARI, AGORA and OARE through 2015 to coincide with the timeframe for the MDGs[2]. However, some major problems, such as the unreliability, expensiveness and slow access to internet in most developing countries, continue to hamper the full utilization of the opportunities provided by the interventionist group. The solution of these problems would greatly enhance the realization of the objectives of the group.

Conclusion

Literature on the interventionist programme and its impact is scanty since not much research has been carried out in the area. The results of this study indicated that the purpose of the interventionist programmes, which is to increase access to information and library development to assist researchers in developing countries, is being realized. The lecturers in the two institutions studied were significantly more aware of the availability of AGORA, HINARI and JSTOR databases, which are members of the interventionist programmes than any other databases studied. One of the major impact of the interventionist programmes is the improvement in scholarship and networking, collaboration and knowledge transfer among colleagues across the globe. Indeed, having enjoyed the benefits of the quality, current and up-to-date research through access to these e-resources, the withdrawal of this programme will affect research.

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