

Availability and use of electronic information resources (EIRs) by doctoral students in Nigerian and South African universities

Eyaufe Obaguono Omamomo¹

Delta State Polytechnic Library

omamomo.a@gmail.com

and

Mutula Stephen²

University of KwaZulu-Natal

Mutulas@ukzn.ac.za

Abstract

The cost of acquiring electronic information resources (EIRs) by tertiary educational institutions in Africa is continually rising against decreasing budgets, yet it has been found that these resources are often underutilised even among doctoral students who are some of the key knowledge producers of the continent's evolving knowledge economy. Needless to say, this limits the role of institutional libraries as important catalysts of development in Africa. Using mixed data collection and analytical methods, this paper compares the extent of use of EIRs by social science doctoral students in the two leading universities in Nigeria and South Africa – Obafemi Awolowo University (OAU), Ife and the University of KwaZulu-Natal (UKZN), Pietermaritzburg, respectively. Data collected from survey questionnaires and semi-structured interviews administered to selected students and library staff was prepared for analysis using content analysis and statistical coding and was subjected to statistical analysis using SPSS. The findings show a low usage of EIRs and greater use of print information resources among participants. The low usage of EIRs is attributed to several factors, notably inadequate library support and low IT competency among library staff and students alike. The effects of these appear to be

1. Eyaufe Obaguono Omamomo PhD is a Librarian at Delta State Polytechnic Library, Otefe – Oghara, Delta State, Nigeria. She completed her PhD on information studies at the University of KwaZulu-Natal in 2019.

2. Stephen Mutula, PhD is a professor and, Acting Dean and Head of the School: MITG, University of KwaZulu-Natal, South Africa

more severe on the OAU side than on the UKZN side. It is therefore concluded that the problem of underutilisation of EIRs by social science doctoral students of OAU, Nigeria and UKZN, South Africa, can be addressed by the provision of adequate support and training in the use of EIRs by their respective libraries. In this way, the institutional libraries will be better able to perform their roles as catalysts in the development of the continent's growing knowledge economy.

Key terms: electronic information resources (EIRs), doctoral students, university libraries, Nigeria, South Africa

Introduction

Universities are recognised as the centre of academic and research activities in every part of the world. Accordingly, the need for quality and relevant information resources is ever increasing, and that in diverse formats and large quantity to satisfy the needs of every member of the university community. These members of the university community are diverse and drawn from every sphere of life. So too are their research and academic interests. The implications for the university is a responsibility of creating an environment conducive to proper academic and research work. In the light of the above, the academic library is established by the university to assist in the provision of information resources and services to cater for the academic and research life of the institution, which has been and has remained the time-honoured role of an academic library. However, the "paradigm change" that has taken place in the world of information with its consequent shift from manual library systems to digital (also referred to as electronic or online or virtual) library has introduced a new role to the academic library. Lukasiewicz (2007) points out that the traditional role of the academic library has been transformed by the ever-changing technological environment.

This wave of transformation has affected information production, publication, access, retrieval and use, such that most academic libraries all over the world now acquire electronic information resources (EIRs) for their users. Several studies have attested to the fact that the advent of IT has changed information format, production as well as

users' access and use from print and traditional methods of access to electronic format, access and use of information sources (NgeTye and Chau, 1995; Chuttur, 2009; Dzandu and Perpetual, 2012; Gibbs, Jennifer, Jill and Heather, 2012; Gakibayo, Ikoja-Odongo and Okello-Obura, 2013; Obasuyi and Usifo, 2013; Oyedapo and Ojo, 2013; Kwafoa, Imoro and Afful-Arthur, 2014; Okite-Amughoru, Makgahlela and Solomon, 2014; Kwaszo, 2015). Compared to the traditional print information resources, electronic resources are convenient to access, easy to search and downloadable (Wu and Shih-chuan, 2011). EIRs now enable researchers all over the world to have access to global information resources at any time from any location and device that has Internet access. Kibbee (n.d.) pointed out that the Web has the potential to provide information far beyond that which a manual library can, and librarians and patrons cannot afford to ignore its capabilities.

Despite the apparent benefits of EIRs, patrons of academic libraries have identified problems that affect their use (Wu and Shih-chuan, 2011). For example, Korobili, Aphrodite and Sofia (2011) found that graduate (including doctoral) students at the Aristotle University of Thessaloniki made use of EIRs but lacked adequate information literacy skills to make maximum use of them. Perrett (2004) also reports that doctoral students at the Australian National University (ANU) do not arrive at ANU with the requisite computer literacy, and this affects their use of EIRs in their academic and research activities. Similarly, Griffiths and Brophy (2005) report that doctoral students confirm that they get confused while using EIRs because they have difficulty understanding the subject categories and the hierarchical organisation of library electronic resources. Also, Okite-Amughoru, Makgahlela and Solomon (2014) confirmed in Nigeria from their research that PhD students encountered problems while using EIRs. These problems included a lack of adequate skills on the part of the students to use EIRs. Studies also revealed a lack of awareness and inadequate facilities as major hindrances to PhD students' use of EIRs in Nigeria (Fabunmi and Asubiojo, 2013; Oyedapo and Ojo, 2013). Fidzani (1998) in Botswana reported a low use of library resources by graduate students because they lacked adequate skills. Blignaut and Els (2010) confirmed the problem of inadequate skill in their study of

'comperacy' assessment of postgraduate (doctoral and masters) students in South Africa.

Problem and purpose of the study

Many studies such as those by Idowu, in Aina, Adigun, Taiwo and Ogundipe (2010) confirm that most academic libraries in Nigeria face a lot of challenges in the use of ICT to access EIRs. On a general note, many academic libraries are unable to afford and maintain electronic information resources and services; provision of free resources does not mean access is free; the cost of purchasing and maintaining ICT gadgets and managing access must be accounted for (Harle, 2009). The challenge is how to ensure maximum utilisation of the available EIRs. Several studies have therefore been carried out to investigate EIRs use among different groups in the academic community. However, there seems to be a paucity of studies of this nature (comparing doctoral students' use) within the context of Nigeria and South Africa. The outcome of the present study also contributes to the ongoing discussion of the use of EIRs within the university community. The purpose of this study is to investigate the use of EIRs by doctoral students in the social sciences at the University of KwaZulu-Natal (South Africa) and the Obafemi Awolowo University (OAU) in Nigeria. To achieve the above, the study will address the following objectives:

- To investigate how AOU and UKZN academic libraries compare in the provision of EIRs.
- To examine the accessibility and use of EIRs by PhD students in both universities.
- To examine the factors that enhance and hinder usage of EIRs by PhD students.

Literature review

As the awareness of EIRs increases there has also been an increase in the amount of research carried out to investigate its use and disuse. Despite the high cost involved in the acquisition of EIRs, most academic libraries within Africa have made efforts to acquire EIRs for their users. Manda (2005) in Tanzania found that EIRs use is on the increase in the ten academic and research institutions studied. In an earlier study,

Dulle, Mulimila, Matovelo and Lwehabura (2002) found that in Tanzania, EIRs use in the thirteen agricultural research institutions and centres is low. This low use is attributed to low information literacy skills. Similarly, in Botswana, studies by Fldzany (1998) and Subair and Kgankenna (2002) revealed an increased awareness of EIRs, yet users lacked sufficient knowledge and skills to access and use them. It was also revealed in the Botswana study that users still depended heavily on traditional sources of information for their academic and research activities. Fordjour, Badu and Adjei's (2010) findings in Ghana are similar to those of Fldzany (1998) and Subair and Kgankenna (2002) in Botswana. Postgraduate students (PhD and MSc inclusive) claimed to be aware of the availability of EIRs, yet an insignificant percentage (27% for e-mail, 17% for databases, and 16% for World Wide Web representing science, social science and arts faculties) make use of them.

Several attempts have been made in Nigeria as well to investigate EIRs use. Studies that have shown an inclination towards EIRs by undergraduates in Nigeria include those of Ugah and Okafor (2008), Nwezeh (2010), Fasae and Aladenyi (2012), Ibegwam (2004), Yusuf and Iwu (2010), Bamigboye and Idayat (2011), Obuh (2009). Several other studies reveal that respondents encountered some difficulties which hindered their use of EIRs. Institutional factors such as inadequate ICT to access EIR and poor ICT literacy skills on the part of postgraduate students as hindrances (Aderibigbe and Aramide, 2012, Adegbiya, Bola and Ogunsola, 2012). Studies such as those of Fabunmi and Asubiojo (2013) and Oyedapo and Ojo (2013) carried out on postgraduate (PhD and MSc) students revealed a low use of EIRs. Oyedapo and Ojo (2013) found that only an insignificant number (6%) of students surveyed used electronic resources frequently at the Hezeiah Oluwasanmi Library, Obafemi Awolowo University, Ile-Ife. Fabunmi and Asubiojo (2013) also found at Hezeiah Oluwasanmi Library, Obafemi Awolowo University, Ile-Ife the OPAC was less used compared to manual catalogue despite respondents' awareness of the OPAC services. Igun (2005) and Adigun, Zakari and Andrew (2010), Ahaioma, Chimezie and Oluchi (2013) reported from their studies that EIR had not impacted much on the academic and research activities of most Nigerian postgraduate students, as

students seemed to depend greatly on print information resources for academic research.

The use of EIR in South African universities seems to reflect similar patterns comparable to Nigerian universities. For example, Constable (2007) reports that the University of South Africa has embraced the change introduced by the ICT in educational environment by making available and providing access to EIRs for students and staff. In the same vein, Mugwisi and Nkomo (2014) investigated the information and communication technology access by students and staff at the University of Zululand in South Africa and revealed that access has been created to EIRs which the academic community has taken advantage of. Dolo-ndlwana (2013) in a recent study reported an increased use of electronic resources by the majority of the postgraduate students and staff of the Cape Peninsula University of Technology (CPUT) for academic and research purposes and that they considered electronic resources valuable in their academic pursuit. Darries (2004) conducted a study of Internet access and use in reference services in higher education institutions in South Africa. Darries also investigated the impact of the Internet on reference services in 26 higher education institutions in South Africa. The study revealed that all the institutions' libraries with the exemption of one provided Internet facilities for their users. Also, it was evident that an electronic reference service was available in the majority of the libraries but this service was characterised by underutilisation. Hadebe (2010) in a study of electronic databases use by masters' students in the Faculty of Humanities, Development and Social Sciences at the University of KwaZulu Natal revealed that 64% of postgraduates were not satisfied with their access to electronic databases in the library. The findings of Soyizwapi (2005) from a similar study on the use of electronic databases by postgraduate students in the Faculty of Science and Agriculture at the University of KwaZulu-Natal, Pietermaritzburg, revealed that the majority of postgraduate students encountered several problems when using the electronic databases. Ngulube (2010) also reported from his study on Internet use among students at St. Joseph's Theological Institution in South Africa that students did not have access to a wide variety of Internet resources. This resulted in a low use of electronic information resources available on

the Internet. The study further revealed that a significant proportion of the respondents (47.3%) had not used the Internet at all.

A cursory view of the reviewed literature on the South African and Nigerian contexts makes it evident that studies on the use EIRs by doctoral students are limited. Instead, there is an increasing number of studies covering postgraduate students in general, undergraduate students and faculty (Dolo-ndlwana, 2013; Hadebe, 2010; Yusuf and Iwu2010; Bamigboye and Idayat, 2011; Ugah and Okafor, 2008; Nwezeh, 2010; Fasae and Aladenyi, 2012; Aderibigbe and Aramide, 2012).

The study therefore compares the use of EIRs by doctoral students at UKZN in South Africa and OAU in Nigeria in order to gain an understanding of the factors that influence their use and non-use of the resource. The purpose of comparative studies, according to Evans, Martina, Bettina, Sursaxby and Peter (1999), is to review multiple cases often with the view of developing typologies or identifying effective practices. It covers two or more cases, such as the present study in a way that produces more generalisable knowledge about causal questions, such as how and why EIRs are used or not used.

In the light of the above, the purpose of comparing the extent of EIRs usage by doctoral students of OAU, Nigeria and UKZN, South Africa is to gain an understanding of the cause(s) of underutilisation of EIRs among the PhD students from the perspectives of their differences and similarities in their pattern and extent of EIRs use.

It should be pointed out that South Africa and Nigeria share certain common profiles as do their universities of KwaZulu Natal and OAU respectively. OAU and UKZN are both ranked as top universities by Webometrics Ranking of World Universities in Nigeria and South Africa respectively. While OAU is ranked first in Nigeria by Webometrics, UKZN is ranked among the best five universities in South Africa (Cybermetrics, 2014). These universities also share features, for example, PhD programmes in the social sciences at OAU are offered in the following disciplines: political science, economics, sociology and anthropology, psychology,

geography, demography and statistics (OAU Handbook 2013). Similarly, at UKZN PhD programs in the social sciences are offered in the areas of political science, sociology, anthropology, information studies, economic history, public policy, cultural and heritage tourism management (UKZN, Faculty of Humanities Handbook, 2013). The academic libraries in both universities are equipped with modern ICTs infrastructures to enable patrons to access EIRs.

Methodology

The study adopted a descriptive survey method with the use of mixed data collection and analytical methods. Data were collected from PhD students using questionnaires, and semi-structured interviews were used for library staff. The targeted population is social sciences PhD students in their second year and above at the University of KwaZulu-Natal (UKZN) in South Africa and Obafemi Awolowo University (OAU) in Nigeria. The study also included the librarians who are in charge of assisting students in the use of EIRs in the respective academic libraries. They are referred to as subject librarians in UKZN and information technology staff (IT staff) at OAU. A census sampling was adopted for the study owing to the small size of the study population. Singh and Masuku (2014) argue that census is more attractive for small populations of about 200 subjects, besides it helps to achieve a desirable precision. PhD students from OAU are 55 in number; from UKZN there are 138 while the six library staff are from OAU and four from UKZN. The entire population for the study therefore is 193 for PhD students and 10 for library staff. Qualitative and quantitative data collected via survey questionnaires and semi-structured interviews were prepared for analysis using content analysis and statistical coding and the data was subjected to statistical analysis using SPSS.

Regarding response rate, 193 copies of the questionnaire were distributed to social sciences PhD students at the Obafemi Awolowo University (OAU), Nigeria and University of KwaZulu-Natal, (UKZN), South Africa. A total of 134 questionnaires were completed and returned, of which 130 (OAU-48 and UKZN-82) were found useful for the purpose of the study. An overall response rate of 68% was therefore achieved for the study. A response rate of 70% is considered excellent, 60% is

considered good while 50% is taken as adequate for a study of this nature according to Babbie and Mouton (2001). A detailed breakdown of the response rate is presented in Table 1. The overall response rate is 68% as presented in Table 1.

Table 1 Response rates N = 203						
Respondents	Institution		Data collection tools	Expected respondents	Actual respondents	%
PhD students	OAU		Questionnaire	55	48	87.3
	UKZN		Questionnaire	138	82	59.4
Subject librarians/ ICT staff	OAU		Semi-structured interview	6	4	66.7
	UKZN		Semi-structured interview	4	4	100
Total				203	138	68

Research findings

Table 2 Distribution of respondents according to level of study N = 130						
Level of study	OAU		UKZN		TOTAL	
	Frequency	%	Frequency	%	Frequency	%
Year 2	13	10	39	30	52	40
Year 3	15	11.5	38	29.2	53	40.8
Year 4 and above	20	15.4	5	3.8	25	19.2
Total	48	36.9	82	63.1	130	100

The first objective the study addresses is to investigate how OAU and UKZN academic libraries compare in the provision of EIRs.

Respondents were asked to indicate which EIRs are available to them at their institutions libraries. The responses received from both questionnaire and semi-structured interview are presented below.

Table 3 Electronic information resources (EIRs) available at institutions' library N = 130 (RQ1)										
Electronic information resources (EIRs)		YES			NO			UNSURE		
		OAU	UKZN	Total	OAU	UKZN	Total	OAU	UKZN	Total
OPAC	F.	17	45	62	2	1	3	29	36	65
	%	35.4	54.9	47.7	4.2	1.2	2.3	60.4	43.9	50

E-book	F.	43	73	116	3	4	7	2	5	7
	%	89.6	89	89.2	6.3	4.9	5.4	4.2	6.1	5.4
E-journals	F.	43	76	119	3	3	6	2	3	5
	%	89.6	92.7	91.5	6.3	3.7	4.6	4.2	3.7	3.8
E-journals databases	F.	35	73	108	4	4	8	9	5	14
	%	72.9	89	83.1	8.3	4.9	6.2	18.8	6.1	10.8
CD-ROM databases	F.	5	29	34	11	6	17	32	47	79
	%	10.4	35.4	26.2	22.9	7.3	13.1	66.7	57.3	60.8
Abstract to articles in e-journal	F.	37	68	105	5	5	10	6	9	15
	%	77.1	82.9	80.8	10.4	6.1	7.7	12.5	11	11.5
Full-text of articles in e-journal	F.	38	70	108	5	4	9	5	8	13
	%	79.2	85.4	83.1	10.4	4.9	6.9	10.4	9.8	10
Online databases	F.	31	73	104	7	4	11	10	5	15
	%	64.6	89	80	14.6	4.9	8.5	20.8	6.1	11.5
E-newspapers	F.	6	38	44	10	8	18	32	36	68
	%	12.5	46.3	33.8	20.8	9.8	13.8	66.7	43.9	52.3
E-conference papers	F.	13	32	45	8	10	18	27	67	67
	%	27.1	39	34.6	16.7	12.2	13.8	56.3	51.5	51.5
E-research reports	F.	14	49	63	5	8	13	29	25	54
	%	29.2	59.8	48.5	10.4	9.8	10	60.4	30.5	41.5
E-theses, dissertation	F.	27	73	100	8	3	11	13	6	19
	%	56.3	89	76.9	16.7	3.7	8.5	27.1	7.3	14.6
E-data archives	F.	17	44	61	11	4	15	20	34	54
	%	35.4	53.7	46.9	22.9	4.9	11.5	41.7	41.5	41.5

The results in Table 3 show that the OAU and UKZN libraries stock : e-journals (91.5%), e-books (89.2%), e-journals databases (83.1%), abstracts to articles in e-journals (80.8%) and full text of articles in e-journals (83.1%). The scores are comparable among respondents within and between the institutions. Online databases, e-theses/dissertations, e-research reports and OPAC were also reported by many respondents to be available (80%, 76.9%, 63%, 62% respectively). The lowest scores are for e-data archives (46.9%), e-conference papers (34.6%), e-newspapers (33.8%) and CD-ROM databases (26.2%). The findings from the table revealed that most of the respondents are unsure of the availability of some important EIRs such as OPAC (50%), e-research reports (54%), and e-data archives (54%). The analysis reveals the high presence of EIRs in both institutions' libraries with slightly different percentages. It is nevertheless established that the PhD students at

OAU and UKZN confirmed the availability of EIRs in their institutions' libraries. It was unexpected though to discover that a lot of social science PhD students are unsure of the availability of relevant EIRs such as OPAC, e-research reports, and e-data archives.

The result from the semi-structured interviews regarding availability of EIRs at universities libraries is consistent with those from the questionnaires. The result reveals that both libraries are equipped with computers, Internet connection and comfortable furniture for students. A subject librarian at UKZN stated that in addition to the general reading space in the library, the library has a separate space called the research commons dedicated to postgraduate students. The research commons is fully equipped with computers and wi-fi connectivity. One IT staff member mentioned that the IT section of the OAU library has about 1000 desktop computers in different departments, with about 140 workstations connected to the Internet.

IT staff from OAU and subject librarians from UKZN stated that their institutions' libraries subscribe to various databases and EIRs which are made available through the Internet to all registered students including social science doctoral students. UKZN libraries provide off-campus access to EIRs as well as interlibrary loan facilities to students. According to the UKZN respondents, every registered student can access UKZN electronic resources from anywhere in the world via the Internet. The electronic resources of OAU library on the other hand can only be accessed within the campus according to ICT staff that were interviewed. It can therefore be inferred that social science doctoral students at UKZN have more access to EIRs than their OAU counterparts.

The second objective addressed by the study is to examine the accessibility and use of EIRs by PhD students in both universities.

Respondents were asked to indicate their extent of use of particular EIRs. The results from the questionnaires are presented in Table 4.

Table 4 Types of EIRs frequently used by respondents N= 130								
Frequency of use	OAU N=48				UKZN N=82			Total N=130
	Year2 F. %	Year3 F. %	Year4 F. %	Total F. %	Year2 F. %	Year3 F. %	Year 4 & above F. %	Total F. %
Very frequently	-	-	-	-	35; 49.3	32; 42.7	4; 8.3	71; 86.6
Frequently	4; 8.3	5; 10.4	5; 10.4	14; 29.2	4; 4.8	5; 6.1	1; 10	10; 12.2
Sometimes	6; 12.5	7; 14.6	13; 27.1	26; 54.2	-	--	--	--
Infrequently	3; 6.3	3; 6.3	2; 4.2	8; 16.7	-	-	-	-
Never	-	-	-	-	-	1; 1.2	1; 1.2	2; 2.4
THE INTERNET								
Very frequently	-	-	-	-	6; 7.3	13; 15.9	1; 1.2	20; 23.4
Frequently	1; 2.1	2; 4.2	3; 6.3	6; 12.5	18; 22	9; 11	-	27; 32.9
Sometimes	6; 12.5	6; 12.5	8; 16.7	20; 41.7	8; 9.8	12; 14.6	2; 2.4	22; 26.8
Infrequently	6; 12.5	6; 12.5	9; 18.8	21; 43.8	6; 7.3	3; 3.7	2; 2.4	11; 13.4
Never	-	1; 2.1	-	1; 2.1	1; 1.2	1; 1.2	-	2; 2.4
E-BOOKS								
Very frequently	-	-	-	-	22; 26.8	20; 23.4	-	22; 26.8
Frequently	3; 6.3	2; 4.2	3; 6.3	8; 16.7	13; 15.9	12; 14.6	2; 2.4	27; 32.9
Sometimes	5; 10.4	7; 14.6	9; 18.8	21; 43.8	4; 4.8	6; 7.3	3; 3.7	10; 12.2
Infrequently	5; 10.4	5; 10.4	8; 16.7	18; 37.5	-	-	-	-
Never	-	-	-	-	-	-	-	-
E-JOURNAL								
Very frequently	-	-	-	-	14; 17.1	16; 19.5	1; 1.2	31; 37.8
Frequently	3; 6.3	2; 4.2	2; 4.2	7; 14.6	13; 15.9	7; 8.5	1; 1.2	21; 25.6
Sometimes	1; 2.1	2; 4.2	7; 14.6	10; 20.8	10; 12.2	8; 9.8	2; 2.4	20; 23.4
Infrequently	9; 18.8	9; 18.8	11; 22.9	29; 60.4	1; 1.2	4; 4.8	1; 1.2	6; 7.3
Never	-	2; 4.2	-	2; 4.2	1; 1.2	3; 3.7	-	4; 4.8
E-JOURNALS DATABASES								
Very frequently	-	-	-	-	1; 1.2	4; 4.8	-	5; 6.1
Frequently	-	-	-	-	5; 6.1	1; 1.2	1; 1.2	7; 8.5
Sometimes	1; 2.1	-	1; 2.1	2; 4.2	3; 3.7	6; 7.3	-	9; 11
Infrequently	3; 6.3	4; 8.3	6; 12.5	13; 27.1	10; 12.2	5; 6.1	2; 2.4	17; 20.7
Never	9; 18.8	11; 22.9	13; 27.7	33; 68.7	20; 23.4	22; 26.8	2; 2.4	44; 53.7
CD-ROM Databases								
hh	-	-	-	-	14; 17.1	18; 22	-	32; 39
Frequently	-	-	2; 4.2	2; 4.2	13; 15.9	6; 7.3	1; 1.2	20; 23.4
Sometimes	5; 10.4	6; 12.5	10; 20.8	21; 43.8	10; 12.2	8; 9.8	2; 2.4	20; 23.4
Infrequently	8; 16.7	7; 14.6	7; 14.6	22; 45.8	1; 1.2	5; 6.1	1; 1.2	7; 8.5
Never	-	2; 4.2	1; 2.1	3; 6.3	1; 1.2	1; 1.2	1; 1.2	3; 6.3
Library's e-resources								

The result shows that the Internet ranked highest (71 (86.6%)) followed by e-journals (42 (51.2%)), e-journal databases (31 (37.8%)) and library electronic resources (32 (39%)) among UKZN respondents. For the OAU respondents, the majority who used the Internet (26 (54.2%)) do so sometimes, while only 14 (29.2%) use it very frequently. The analysis indicates that respondents make more use of the Internet

and library's electronic resources, although respondents from OAU use the resources only occasionally.

The results further reveal that important EIRs such as e-books, e-journals, e-journal databases and library's electronic resources which recorded high use among UKZN respondents are used less frequently by OAU respondents. Many respondents use e-books (20 (41.7%)), e-journals (21 (43.8%)), library's electronic resources (21 (43.8%)) occasionally, while for never used resources e-journal databases, the library's electronic resources and e-books recorded 29 (60.4%); 22 (45.8%) and 21 (43.8%) respectively.

The result of social science PhD students' extent of use of EIRs from the perspectives of IT staff from OAU library and subject librarians from UKZN did not reveal much. The interviewees stated that it was difficult for them to assess and rate the extent of EIRs use by social science PhD students as they lacked records of EIR use filed according to discipline and level. However, they were able to indicate that, in a period of a week, about 20-25 PhD students meet them for assistance. This finding is the same for both institutions.

The third objective addressed by the study is to examine the factors that enhance and conversely hinder doctoral students' use of EIRs

This is addressed in the survey questionnaire by the following specific questions:

- What are your reasons for choosing to use EIRs?
- What are the factors that hinder your use of EIRs?

Table 5 presents the results of reasons for choosing to use EIRs. A list of factors was provided for the respondents to choose from. It can be seen from the results that all the listed factors are highly rated by respondents from both institutions. Access to current and up-to-date information (118 (90.8%)), availability of computers (112 (86.2%)), awareness of the resource (112 (86.2%)), saves time (110 (84.6%)) and quick and easy retrieval (110 (84.6%)) top the list of factors that influence respondents' use of EIRs. A closer examination of the results show that computer skills are rated low among second year (4 (8.3%)) and third year (9 (18.8%)) OAU

students. Note that the ostensibly low rate recorded by respondents in the fourth year and above from UKZN could be due to their low representation in the survey. It can be deduced from the analysis that no factor is remarkably rated high enough.

Table 5 Respondents' reasons for choosing to use EIRs N= 130 (RQ3)														
Factors	OAU n=48						UKZN n=82						N=130	
	Year 2		Year 3 F. %		Year4 & above		Year 2 F. %		Year 3 F. %		Year 4 & above		Total F. %	
	F.	%	F.	%	F.	%	F.	%	F.	%	F. %	%	F.	%
Saves time	12	25	13	27.1	15	31.3	31	37.8	34	41.5	5	6.1	110	84.6
Easy to use	12	25	11	22.9	13	27.1	31	37.8	34	41.5	4	4.8	106	81.5
Availability of computer	12	25	14	29.2	18	37.5	34	37.8	30	36.6	4	4.8	112	86.2
Awareness of the resources	12	25	14	29.2	15	31.3	24	29.3	27	32.9	3	3.7	112	86.2
Computer use skills	4	8.3	9	8.8	14	29.2	29	35.4	24	29.3	3	3.7	83	63.8
More informative	13	27.1	15	31.3	16	33.3	15	18.3	31	37.8	4	4.8	94	72.3
EIRs search skills	3	6.3	7	14.6	10	20.8	25	30.5	26	31.7	3	3.7	74	56.9
Ease of access	12	25	12	25	18	37.5	28	34.1	32	39	3	3.7	105	80.8
Quick and easy retrieval	13	27.1	13	27.1	18	37.5	31	37.8	31	37.8	4	4.8	110	84.6
Access to current and up-to-date information	13	27.1	14	29.2	19	39.6	36	43.9	32	39	4	4.8	118	90.8

Table 6 presents the analysis of responses to the factors that hinder students' use of EIRs and reveals a distinct dissimilarity in the responses from OAU and UKZN respondents. All respondents (48; 100%) from OAU indicated that poor Internet/network connectivity, slow download rates, limited availability and access to IT facilities as well as limited access to some EIRs hinder their use of EIRs. For the UKZN respondents, the figures are 47.6% (39), 45.1% (37), 40.2% (33) and 63.4% (52) respectively. In terms of the categories 'consumes time', 'difficult to use' and 'less informative', responses from both institutions are similar in the sense that these factors are less of a hindrance than other factors. 'Lack of skills to use' is rated high among all responses (OAU – 38 [79.2%]; UKZN – 66 [80.5%]). The result suggests

that most of the factors that constitute hindrances to OAU respondents relate to facilities provided by the institution's library and the respondents' user skills. Fewer respondents, though significant, from UKZN, seem to find the institution's library facilities problematic except with regard to limited access to some EIRs (52 (63.4%)).

The result of semi-structured interviews is somewhat similar to that of the questionnaires. On the issue of EIRs use, the challenges faced by both students and staff alike were raised. Suggestions of possible ways to tackle the challenges were also sought from the interviewees. Three respondents from OAU stated that the challenges they face are both from the side of the students and those from the facilities available to them. The results reveal that IT staff from OAU face the following challenges: insufficient computers, poor Internet connectivity and low EIRs and computer use skills on the part of the students. Two respondents from UKZN on the other hand stated that the major challenge they face, on the part of the students, is low literacy skills. One mentioned having a problem with keeping up with the students because they are so many. The last one said she faces a language barrier which hinders effective communication and also the problem of insufficient subscriptions. Suggestions of how the identified challenges can be tackled are similar for both institutions. All respondents generally suggested improvement in the facilities on the ground, getting the library to arrange more outreach programmes and training sessions for doctoral students to get trained in the access and use of EIRs.

Table 6 Factors that hinder respondent's EIRs use N = 130

Factors	Institutions															
	OAU n=48								UKZN n=82							
	Year2		Year3		Year 4 &		Total		Year2		Year3		Year 4		Total	
	F.	%	F.	%	F.	%	F.	%	F.	%	F.	%	F.	%	F.	%
Consumes time	2	4.2	3	6.3	3	6.3	8	16.7	9	11	4	4.9	-	-	13	15.9
Difficult to use	1	2.1	4	8.3	5	10.4	9	18.8	3	3.7	2	2.4	-	-	15	18.3
Lack of skills to use	11	22.9	12	25	15	31.3	38	79.2	13	15.9	14	17.1	1	1.2	66	80.5
Less informative			1	2.1	1	2.1	2	4.2	3	3.7	-	-	-	-	3	3.7

Low skills on use of computer	10	20.8	13	27.1	18	37.5	41	85.4	8	9.8	6	7.3		-	14	17.1
Low information literacy skills	11	22.9	13	27.1	19	39.6	43	89.6	12	14.6	8	9.8		-	20	24.4
Lack of awareness of EIRs	11	22.9	12	25	19	39.6	42	87.5	8	9.8	5	6.1	1	1.2	14	17.1
Poor internet/network connectivity	13	27.1	15	31.3	20	41.7	48	100	18	22	18	22	3	3.7	39	47.6
Slow rate of download	13	27.1	15	31.3	20	41.7	48	100	21	25.6	15	18.3	1	1.2	37	45.1
Limited IT for EIRs access/use	13	27.1	15	31.3	20	41.7	48	100	17	31.3	15	18.3	1	1.2	33	40.2
Limited access to some EIRs	13	27.1	15	31.3	20	41.7	48	100	29	35.4	19	23.2	4	4.9	52	63.4

Conclusion

Based on the research findings, it can be concluded that IT and Internet facilities in the libraries under consideration are comparable. EIRs reported to be available at both institutions' libraries are also comparable. The results, however, reveal a divergence in the extent of use of electronic information resources among respondents from the two institutions. Despite the high presence of EIRs at the OAU library, the results show a very low use of the resources compared to what UKZN respondents demonstrated. In the final analysis, the majority of respondents indicated that they make equal use of EIRs and printed resources for the purpose of their theses. Respondents from OAU demonstrated lower levels of computer and IT/information literacy skills than UKZN respondents. The results revealed that most respondents lack adequate search skills to access EIRs, which hinders their effective use.

Results from the interviews were, in some cases, in alignment with the questionnaire results, while in other cases there are stark contrasts. There is a consensus among IT staff from OAU and subject librarians from UKZN that the institutions need to improve the facilities and resources available for students' use.

From the literature review, it is evident that there was no comparative study of this nature that has been done within the specific contexts of South Africa and Nigeria, which is quite significant. This study is therefore significant as its outcome provides an understanding of the factors that influence the use and non-use of the electronic resources among social sciences doctoral students of South Africa and Nigeria. The study has also revealed the quality and quantity of EIRs available to and accessible to the students investigated. The implication is that students in the affected universities will be given opportunities to benefit from the advantages that come with EIRs use.

The study provides information on the causes of underutilisation of EIRs by social science doctoral students in OAU, Nigeria and UKZN, South Africa, particularly to the study's respondents. If this information is matched with timely intervention from academic libraries' management, the efforts expended on EIRs acquisition and maintenance by OAU and UKZN libraries will be adequately rewarded through increased use.

The study also contributes to the benefit of the general Nigerian and South African society as increased access and use of information enhances research output. By addressing these issues, the research quality and output of social science doctoral students in OAU Nigeria and UKZN, South Africa will be enhanced and improved. This will eventually translate into placing OAU and UKZN on enviable and competitive positions on the international higher educational scene.

This study recommends that:

- OAU and UKZN libraries be provided with further education and enlightenment to social science doctoral students on the importance of EIRs;
- The OAU library provides greater access to her EIRs collections as the apparent cause of underutilisation is not lack of awareness but lack of access.
- Both academic libraries devise means of monitoring and supervising EIR use. This is mostly recommended for OAU library where underutilisation of EIRs is very high.

- OAU should incorporate end-user computer courses into the university's broad curriculum to impart to social science doctoral students computer user skills. OAU library should organise computer literacy programmes for her users.

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