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Abstract

Undergraduates use electronic library resources for academic activities because it offers access to relevant and current information from different subject areas. Literature review indicated that undergraduates' use of electronic library resources is low in Nigeria owing to a number of factors that are largely attributed to user's attitude, computer literacy and information retrieval skills, but, little attention was given to factors such as demographic variables and academic discipline. This study, therefore, examined demographic variables (age, gender) and academic discipline as determinants of undergraduates' use of electronic library resources in in federal universities in South-west, Nigeria. The descriptive survey research design was used for this study. The multi-stage sampling method was used to select 1,526 undergraduates from four faculties and three departments in the six federal universities in South-west, Nigeria. Frequency counts, percentages, mean, standard deviation, correlation, and regression methods were used to analyse the data at 0.05 level of significance. Age influenced the use of electronic library resources by undergraduates in federal universities in South-west, Nigeria while gender and academic discipline did not. It is therefore, recommended that university libraries should ensure that undergraduates optimize the use of electronic library resources irrespective of age, gender or academic discipline.

Key words: Age, Gender, Academic discipline, Electronic Library resources, Undergraduates

Introduction
The mental, moral and physical development of man and conferment of academic degree on persons considered worthy in learning and character constitute the essence of higher academic institutions. As the intellectual heart of the university, the academic library is established to support the parent organisation in achieving the organisational objectives. Virtually in every higher educational institution, the position of the library is cardinal. In addition, the basic purpose of the university library is to provide materials (print and electronic), assistance and environment that facilitate teaching, learning and research in order to advance the intellectual development of its users. In a bid to meet up with the evolving technologies, universities make available a wide variety of electronic library resources (ELRs) for use by students and staff in their respective institutions. These resources are in various forms and cover all disciplines in academics. They constitute the pivots for effective and efficient research due to ease of access, timeliness, currency and relevance of information (Ukachi, 2013). Thus, the essence of these resources is to ensure support for the educational activities.

However, the assessment of the use of ELRs has revealed that, as valuable as the resources are, undergraduates in Nigeria have not exploited the resources to the fullest. Although, some factors have been identified as having influence on use of electronic library resources by scholars including Natarajah, Suresh, Suvarama, Sevukan, (2010); Ekenna and Mabawonku, (2013).; Emwanta and Nwalo, (2013); Quadri, Adetimirin and Idowu, (2014); Daramola, (2016) and Ebijuwa,(2018) but the enormity of the consequences has not been adequately considered. Age, gender and academic disciplines could be possible factors that exert influence on undergraduates' use of electronic library resources. Thus, there is the need to examine the relationship between demographic variables (age, gender) and academic discipline on undergraduates' use of electronic library resources in Nigeria. This study fills this gap by providing empirical evidence on some demographic variables (age, gender) and academic discipline on use of electronic library resources by undergraduates in federal universities in South-west, Nigeria.

Objective of the Study
The study seeks to:
1. ascertain the demographic variables (age, gender) of the undergraduates in federal universities in South-west, Nigeria;
2. find out the academic purposes for which the undergraduates use electronic library resources in federal universities in South-west, Nigeria;
3. determine the frequency of electronic library resources use by undergraduates in federal universities in South-west, Nigeria;
4. determine the relationship between undergraduates' demographic variables (age, gender) on the use of electronic library resources in federal universities in South-west, Nigeria;
5. ascertain the relationship between undergraduates' academic discipline and the use of electronic library resources in federal universities in South-west, Nigeria.

Hypotheses
The following null hypotheses were tested in the study at $P < 0.05$ level of significance:
H_{o1}: There is no significant relationship between undergraduates' age and use of electronic library resources.

H_{o2} There is no significant relationship between undergraduates' gender and use of electronic library resources.

Ho_3:   There is no significant relationship between undergraduates' academic discipline and use of electronic library resources.

Ho_4:   Age, gender and academic discipline would have no relative significant influence on use of electronic library resources in federal universities in South-west, Nigeria.

Literature Review

Studies on factors that affect the use of ELRs in universities have received widespread attention in the empirical literature. In this review, the focus would be on influence of gender and academic discipline on use of ELRs.

Use of electronic library resources by undergraduates

Several studies have investigated the use of electronic resources in universities considering the impact of digital awakening around the globe. In Saudi Arabia, Shetty, Al Ghamdi and Al Amer (2015) conducted an investigation that focused on the patterns engaged by students on the use of electronic resources available at the Riyadh College of Dentistry and Pharmacy, Kingdom of Saudi Arabia. It was found that the major use of full-text journal articles mainly centred on research activities and individual study. It was also established that Medline was not well used by the majority of respondents. However, female students were recorded to be the few users that engaged the use of Medline. It was suggested that students needed to be trained on the use of electronic library resources. In Bangladesh, a study by Mostafa (2013) in Asian University, Uttara University, and North South University at Dhaka in Bangladesh investigated use and impact of e-resources. It was revealed through the study that low usage in these universities undermined the purpose of acquisition as several of these resources had almost no use by students. It was also discovered that despite the fact that the universities expended a lot of money on e-resources, less attention was given to infrastructure that would enable their use.

In addition, the perception of undergraduate students of the Federal University of Technology, Akure was sampled by Daramola (2016) on use of electronic library resources. The result showed that majority of the users of electronic resources were male students; research and class assignments constituted the major reasons for their use of electronic resources; most frequently used electronic resources were electronic journals, electronic books, electronic magazines; the perception of students on the library was found to be positive. The e-library was however considered to have insufficient computers for the users. The study recommended based on the findings that more computers be acquired into the e-library to facilitate ease of accessibility and use of electronic resources. On the contrary, a study by Omosekejimi, Eghworo, and Ogo (2015) on use of e-resources that focused on students from 200 level and above, from the Federal University of Petroleum Resources, Effunrun, Warri, Nigeria found that students recorded high success in their academic endeavours as a result of engaging in the use of electronic library resources.

Influence of age on use of electronic library resources

Several demographic variables have been associated with use of electronic library resources. Age has been observed to correlate with use of computers and consequently electronic resources. Corroborating this assertion is Okiki (2011) who stated that the younger generations are largely exposed to computers from their early years. Similarly, Diyaolu, Okunlaya, Ibrahim opined that

most users of digital resources are younger students. Likewise, Bar-llan, Bluma, Peritz, and Wolman, (2003) asserted that the most active users of electronic resources are the younger students. Moreover, Rogers (2003) stated that demographic attributes play an important role in predicting adoption and that economic status (income) is highly correlated to initial adoption. This suggests that undergraduates' age could contribute to the effectiveness of electronic library resources use.

While most scholars agree that there is no statistically significant relationship between age and electronic library resources use, some studies have found positive significant age differences in use of electronic resources. Okiki and Ashiru (2011) found that there were significant age differences on the computer task, as measured by older adults making few correct decisions and taking longer time to make their decisions than younger adult. In a study by Islam (2011) on effect of demographic factors on e-learning effectiveness in a higher learning Institution in Malaysia, it was concluded that the level of education, program of study, age and gender were found to be significant in the effectiveness of e-learning.

Omosebi and Okhakhu (2017) in a study on psychological factors and the use of e-library resource among undergraduates in South-west, Nigeria found that the interaction of age of students and department of students has significant effect on students e-library use. Also, Sarasvady and Khatri (2015) examined a study of the use of electronic resources for implementing library consortium. They found a significant correlation between the reason for consulting the journals and the age of the participants. The young users are inclined to use electronic journals particularly for study and research whereas older participants use them typically for both research and teaching.

Influence of gender on use of electronic library resources
Studies have shown various relationships that exist between gender and use of electronic library resources, yet, the role of gender in determining the use of electronic information resources appears to be inconclusive. While, Okiki and Ashiru (2011) in a research carried out on the factors influencing the use of electronic information resources in the six universities in South-west region of Nigeria, found that more males (53.82%) than females (46.18%) used electronic information resources, Ukachi (2013) found that female students ($\overline{x}$ = 1.68) used electronic resources more than male students ($\overline{x}$ = 0.36) and Ebijuwa (2018) found that female students (61.6%) used e-resources than male students (38.4%). Meanwhile, Quadri (2013) in a study investigated the influence of demographic factors on use of online library resources by undergraduate students in two private Nigerian university libraries found no significant relationship between gender and use of online library resources (r=.95.; P=0.05). However, the researcher maintained that students' demographic factors should not be a barrier to e-resources use and as a result, students of all ages and gender should endeavour to acquire knowledge required to enable them make effective use of online library resources anytime and anywhere.

Influence of academic discipline on electronic library resources use by undergraduates
Use of electronic library resources by disciplines had been investigated in some studies. It had been revealed that disciplines influence the relationship of academics to knowledge, the relationship of students at undergraduate and post-graduate levels to teaching staff and the type of knowledge that students are expected to gain about their subject or discipline area (Kemp and Jones, 2007). For instance, Olle and Boraggo (2010) illustrated that some academic disciplines,

particularly science and vocational subjects such as Social Work, are notable for the practical requirements involved in their study. This indicates that the university's organisation of knowledge into academic disciplines and subject areas represents a critical factor that could predict the use of electronic library resources.

In a study on how graduate students perceive, use and manage digital information resources at the National University of Taiwan, Wu and Chen (2012) found that the pattern of usage varied according to the subject background of the respondents. This according to Wu and Chen was due to the fact that humanities students found the e-resources less important than the students of other disciplines. In the health related disciplines, Aquil and Sulaiman (2017) in a study of knowledge and use of electronic information resources by medical students at Al-Jouf University in Saudi Arabia established that the use of e-databases by medical students was much higher than the dental students.

At the University of Wollongong Library, New South Wales, Australia, Jantti and Cox (2013) discovered that library resources were accessed mostly by the faculty of sciences, while the least access was found in health and behavioural sciences. The investigation at Chilean University by Jara, Clasing, González, Montenegro, Kelly, Alarcón, Sandoval and Saurina (2017) focused on the patterns adopted by undergraduate students in accessing electronic resources. It was discovered that although students use digital resources, the use of print resources did not reduce significantly. This review shows that the pattern of using ELRs among undergraduate students varied significantly. Thus, the influence of academic discipline on electronic library resources use by undergraduates is inconclusive.

Despite the initial attempts at understanding factors that could influence use of electronic library resources, the review of literature indicated that none of these studies focused on the relationship between age, gender and academic discipline on use of electronic library resources by undergraduates in Federal universities in Nigeria.

Methodology
Descriptive survey research design was adopted for the study. All the federal universities in South-west, Nigeria were included in this study: Federal University of Agriculture, Abeokuta (FUNAAB); Federal University of Technology, Akure (FUTA); Federal University, Oye-Ekiti (FUOYE); Obafemi Awolowo University (OAU); University of Ibadan (UI); and University of Lagos (UNILAG) excluding the National Open University of Nigeria. The population comprised 140,351 undergraduates in the six selected federal universities in South-west, Nigeria.

Multi-stage sampling technique was used and involved two stages. The first stage was to select the faculties. Therefore, faculties that were common to the selected federal universities were selected. The selected faculties were Arts, Engineering/ Technology, Science, and Social sciences/ Humanities which constitute the study sample. The next level of sampling was at the departmental level. The departments that were common to the faculties in the universities were selected. Thus, in the Faculty of Arts, the selected three departments were: English, History and Philosophy. In the Faculty of Engineering, the three selected departments were: Electrical and Electronics Engineering, Civil Engineering, and Mechanical Engineering. In the Faculty of Science, the departments of Chemistry, Physics, and Mathematics were selected. In the Faculty

of Social Science/ Humanities, the departments of Economics, Sociology and Psychology were selected. The total numbers of all selected departments was twelve (12).

In the twelve selected departments, the total number of the students was 30, 516. Due to the large number of students in the selected departments, a sampling fraction of 5% was drawn from the total number of students in the selected departments to ensure a representative sample reflecting the selected departments and faculties. This gave a sample size of 1,526. A total of 1,526 copies of the questionnaire were distributed among the respondents by hand. Out of 1,526 copies of the questionnaire administered, 1,396 copies were returned, while 1,378 (90.3%) copies were found usable and valid for analysis. The data collected for this study were collated and analysed using descriptive statistics of frequency counts, percentages, mean and standard deviation for the research question. The research hypotheses were tested using Pearson Product Moment Correlation (PPMC) at 0.05 level of significance.

Findings of the study
The demographic variables (age, gender) of the respondents by universities were analysed using descriptive statistics (frequency counts and percentages) and the results are presented in Table 1. Data revealed that the Federal University of Technology, Akure (FUTA), had the highest number of respondents with 369 (26.8%), followed by Federal University of Agriculture, Abeokuta (FUNAAB), with 317 (23.0%) respondents; while Federal University, Oye Ekiti (FUOYE), had the least number of respondents with 64 (4.6%). Also, data revealed that the highest number of respondents were found in the age bracket of 20-22 years with 494 (35.8%); followed by 17-19 years with 342 (24.8%); followed closely by 23-25 years with 340 (24.7%) and 24 (1.7%) in the age range of 29+ years respectively. Results on gender revealed that majority of the respondents were males 933 (67.7%) while females constituted 445 (32.3%).

Result on the faculties of the respondents revealed that, Faculty of Science had majority of the respondents with 568 (41.2%), followed by the Faculty of Engineering with 481 (34.9%), while the Faculty of Social Science had the least number of respondents with 147 (10.7%). On the departments of the respondents, data showed that majority of the respondents 568 (41.2%) were studying Chemistry/Physics/Mathematics, 481 (34.9%) were studying Electrical Electronics Engineering/Civil Engineering/Mechanical Engineering; 147 (10.7%) were studying Economics/Psychology/Sociology; while the least number of respondents 182 (13.2%) were studying English/History/Philosophy. The distribution of the respondents based on the faculties indicated that there were higher number of respondents in between the faculties of Science and Engineering respectively.

Table 1: Demographic characteristics of the respondents

Institution	Frequencies	Percentages
FUTA	369	26.8
OAU	210	15.2
UNILAG	244	17.7
UI	174	12.6
FUOYE	64	4.6
FUNAAB	317	23.0
Total	1378	100.0
Academic discipline	Frequency	Percentage
Science (Chemistry/Physics/Mathematics)	568	41.2
Engineering (Electrical/Civil/Mechanical)	481	34.9
Social Science (Economics/Psychology/Sociology)	147	10.7
Art (English/History/Philosophy)	182	13.2
Total	1378	100.0
Age	Frequency	Percentage
14-16 Years	27	2.0
17-19 Years	342	24.8
20-22 Years	494	35.8
23-25 Years	340	24.7
26-28 Years	151	11.0
29 Years +	24	1.7
Total	1378	100.0
Gender	Frequency	Percentage
Male	933	67.7
Female	445	32.3
Total	1378	100.0

Purpose of use of electronic library resources

The results of the various purposes for which undergraduates used ELRs are presented in Table 2. The table revealed that respondents from Federal University of Technology, Akure 268 (72,7%) used ELRs to follow blog discussions on subject area of interest, followed by Obafemi Awolowo University 204 (97.2%), University of Lagos 113 (64.9%), University of Ibadan 113 (64.9%), Federal University, Oye-Ekiti 49 (76.6%) and Federal University of Agriculture, Abeokuta 215 (67.8%). The result also revealed that 174 (47.2%) respondents from the Federal University of Technology, Akure agreed to the use of the internet access in the library to chat with friends. This was followed in quick succession by respondents from Obafemi Awolowo University 193 (91.9%), University of Lagos 59 (24.2%), University of Ibadan 40 (23.0%), Federal University, Oye-Ekiti 24 (37.5%) and Federal University of Agriculture, Abeokuta 139 (43.8%).

In addition, Table 2 showed that 278 (75.3%) respondents from Federal University of Technology, Akure agreed to use ELRs to retrieve current literature for studies, followed by respondents from Obafemi Awolowo University 206 (98.1%), University of Lagos 182 (74.5%), University of Ibadan 144 (82.2%), Federal University, Oye-Ekiti 48 (75.0%) and Federal University of Agriculture, Abeokuta 225 (77.6%). The result also revealed that 271 (73.4%) respondents from the Federal University of Technology, Akure agreed to the use ELRs to search for scholarship opportunities. This was followed by respondents from Obafemi Awolowo University 207 (98.5%), University of Lagos 170 (69.7%), University of Ibadan 143 (82.2%), Federal University, Oye-Ekiti 48 (75.0%) and Federal University of Agriculture, Abeokuta 225 (70.9%).

Furthermore, the table revealed that respondents from Federal University of Technology, Akure 301 (81.6%) used ELRs to source materials for research/writing project, followed by Obafemi Awolowo University 207 (98.5%), University of Lagos 204 (83.6%), University of Ibadan 154 (88.5%), Federal University, Oye-Ekiti 55 (85.9%) and Federal University of Agriculture, Abeokuta 245 (77.3%). The table also revealed that respondents from Federal University of Technology, Akure 288 (78.3%) used ELRs for current awareness, followed by Obafemi Awolowo University 207 (98.6%), University of Lagos 191 (78.3%), University of Ibadan 154 (88.5%), Federal University, Oye-Ekiti 54 (84.4%) and Federal University of Agriculture, Abeokuta 242 (76.4%).

Table 2 showed that 307 (83.2%) respondents from Federal University of Technology, Akure agreed to the use of ELRs to update knowledge in subject areas of interest. Followed by respondents from Obafemi Awolowo University 208 (99.0%), University of Lagos 207 (84.8%), University of Ibadan 161 (92.6%), Federal University, Oye-Ekiti 56 (87.5%) and Federal University of Agriculture, Abeokuta 260 (82.0%). The result also revealed that 308 (83.5%) respondents from the Federal University of Technology, Akure agreed to the use of ELRs to do class assignments. This was followed in quick succession by respondents from Obafemi Awolowo University 208 (99.0%), University of Lagos 213 (87.3%), University of Ibadan 160 (92.0%), Federal University, Oye-Ekiti 57 (89.1%) and Federal University of Agriculture, Abeokuta 243 (76.7%).

Overall, the findings revealed that undergraduates used electronic library resources for various academic purposes. This result is an encouraging development because ELRs enables access to more information vital for academic and research activities. However, the results showed that out of the six federal universities, Federal University of Technology, Akure had the highest purpose of use of ELRs. They made the most use of ELRs to update knowledge in subject areas of interest; to do class assignments; for current awareness; to search for scholarship opportunities; to retrieve current literature for studies; to source materials for research/writing project and to follow blog discussion while, Obafemi Awolowo University, had the highest on use of the internet access in the library to chat with friends.

Table 2: Purposes of use of electronic library resources by undergraduates

S/n	Purpose of Electronic Library Resources Use	University	SD	D	A	SA
1	I use ELRs to follow blog discussions on subject area of interest	FUTA	35(9.5%)	66(17.9%)	160(43.4%)	108(29.3%)
		OAU	2(1.0%)	4(1.9%)	65(31.0%)	139(66.2%)
		UNILAG	31(12.7%)	82(33.6%)	87(35.7%)	44(18.0%)
		U.I.	18(10.3%)	43(24.7%)	90(51.7%)	23(13.2%)
		FUOYE	6(9.4%)	9(14.1%)	36(56.3%)	13(20.3%)
		FUNAAB	39(12.3%)	63(19.9%)	149(47.0%	66(20.8%)
2	I use the internet access in the library to chat with friends	FUTA	91(24.7%)	104(28.2%)	87(23.6%)	87(23.6%)
		OAU	-	17(8.1%)	66(31.4%)	127(60.5%)
		UNILAG	77(31.6%)	108(29.3%)	36(14.8%)	23(9.4%)
		U.I.	66(37.9%)	68(39.1%)	29(16.7%)	11(6.3%)
		FUOYE	22(34.4%)	18(28.1%)	17(26.6%)	(710.9%)
		FUNAAB	107(33.8%)	71(22.4%)	86(27.1%)	53(16.7%)
3	I use ELRs to retrieve current literature for studies	FUTA	33(8.9%)	58(15.7%)	168(45.5%)	110(29.8%)
		OAU	-	4(1.9%)	83(39.5%)	123(58.6%)
		UNILAG	25(10.2%)	37(15.2%)	116(47.5%)	66(27.0%)
		U.I.	9(5.2%)	21(12.1%)	82(47.1%)	62(35.6%)
		FUOYE	3(4.7%)	9(14.1%)	27(42.2%)	(2539.1%)
		FUNAAB	36(11.4%)	35(11.0%)	160(50.5%)	86(27.1%)
4	I use ELRs to search for scholarship opportunities	FUTA	27(7.3%)	71(19.2%)	165(44.7%)	106(28.7%)
		OAU	-	3(1.4%)	37(17.6%)	170(81.0%)
		UNILAG	28(11.5%)	46(18.9%)	101(41.4%)	69(28.3%)
		U.I.	9(5.2%)	22(12.6%)	81(46.6%)	62(35.6%)
		FUOYE	2(3.1%)	14(21.9%)	30(46.9%)	18(28.1%)
		FUNAAB	27(8.5%)	65(20.5%)	145(45.7%)	80(25.2%)
5	I use ELRs to source materials for research/writing project	FUTA	19(5.1%)	49(13.3%)	163(44.2%)	138(37.4%)
		OAU	-	3(1.4%)	62(29.5%)	145(69.0%)
		UNILAG	17(7.0%)	23(9.4%)	108(44.3%)	96(39.3%)
		U.I.	7(4.0%)	13(7.5%)	60(34.5%)	94(54.0%)
		FUOYE	2(3.1%)	7(10.9%0	18(28.1%)	37(57.8%)
		FUNAAB	27(8.5%)	45(14.2%)	118(37.2%)	127(40.1%)
6	I use ELRs for current awareness	FUTA	21(5.7%)	59(16.0%)	186(50.4%)	103(27.9%)
		OAU	-	3(1.4%)	72(34.3%)	135(64.3%)
		UNILAG	21(8.6%)	32(13.1%)	114(46.7%)	77(31.6%)
		U.I.	7(4.0%)	13(7.5%)	80(46.0%)	74(42.5%)
		FUOYE	2(3.1%)	8(12.5%)	29(45.3%)	25(39.1%)
		FUNAAB	27(8.5%)	48(15.1%)	165(52.1%0	77(24.3%)
7	I use ELRs to update my knowledge in subject areas of interest	FUTA	15(4.1%)	47(12.7%)	170(46.1%)	137(37.1%)
		OAU	-	2(1.0%)	92(43.8%)	116(55.2%)
		UNILAG	18(7.4%)	19(7.8%)	101(41.4%)	106(43.4%)
		U.I.	9(5.2%)	4(2.3%)	69(39.7%)	92(52.9%)
		FUOYE	2(3.1%)	6(9.4%)	19(29.7%)	37(57.8%)
		FUNAAB	24(7.6%)	33(10.4%)	128(40.4%)	132(41.6%)
8	I use ELRs to do class assignments	FUTA	15(4.1%)	46(12.5%)	162(43.9%)	146(39.6%)
		OAU	-	2(1.0%)	58(27.6%)	150(71.4%)
		UNILAG	18(7.4%)	13(5.3%)	94(38.5%)	119(48.8%)
		U.I.	9(5.2%)	5(2.9%)	83(47.7%)	77(44.3%)
		FUOYE	2(3.1%)	5(7.8%)	22(34.4%)	35(54.7%)
		FUNAAB	27(8.5%)	47(14.8%)	142(44.8%)	101(31.9%)

The results of the frequency of ELRs use by the respondents on university basis are presented in Table 3. The results showed that 82(22.2%) respondents from Federal University of Technology, Akure (FUTA) used E-journals daily, while 134 (36.3%) used E-books weekly. In addition, the table revealed that 42 (20.0%) respondents at Obafemi Awolowo Universities (OAU) used E-journals daily, 94 (44.8%) used E-books weekly while 12 (5.7%) used Online Public Access Catalogue (OPAC) monthly.

The findings showed that 66 (27.0%) respondents at University of Lagos (UNILAG) used E-journals daily, 89 (36.5%) used E-books weekly while 19 (7.8%) used CD-ROM DATABASES databases monthly. The result showed that 62 (35.6%) respondents from University of Ibadan (U.I) used Online Public Access Catalogue (OPAC) daily, 73 (42.0%) used CD-ROM databases weekly while, 4 (2.3%) never used E-thesis. In addition, 122 (38.5%) respondents at Federal University Oye-Ekiti (FUOYE) used E-journals weekly, 32 (50.0%) used Online Public Access Catalogue (OPAC) daily while 4 (6.3%) never used E-thesis. The table also revealed that 97 (30.6%) respondents at Federal University of Agriculture, Abeokuta (FUNAAB) used E-journals daily, 85 (26.8%) used E-books weekly while 20 (6.3%) never used Online Public Access Catalogue (OPAC).

Table 3: **Frequency of use of electronic library resources by undergraduates on university basis**

S/n	Items	University	Daily	Weekly	Monthly	Occasionally	Never Used
1	E-journals	FUTA	82(22.2%)	139(37.7%)	28(7.6%)	30(8.1%)	9(24.4%)
		OAU	42(20.0%)	131(62.4%)	9(4.3%)	6(2.9%)	22(10.5%)
		UNILAG	66(27.0%)	116(47.5%)	19(7.8%)	32(13.1%)	11(4.5%)
		U.I.	16(9.2%)	86(49.4%)	33(19.0%)	29(16.7%)	10(5.7%)
		FUOYE	14(21.9%)	34(53.1%)	3(4.7%)	7(10.9%)	6(9.4%)
		FUNAAB	97(30.6%)	122(38.5%)	17(5.4%)	51(16.1%)	30(9.5%)
2	E-books	FUTA	47(12.7%)	134(36.3%)	25(6.8%)	46(12.5%)	117(31.7%)
		OAU	25(11.9%)	94(44.8%)	4(1.9%)	3(1.4%)	84(40.0%)
		UNILAG	46(13.9%)	89(36.5%)	14(5.7%)	40(16.4%)	55(22.5%)
		U.I.	10(5.7%)	58(33.3%)	31(17.8%)	26(14.9%)	49(28.2%)
		FUOYE	5(7.8%)	22(34.4%)	12(18.8%)	10(15.6%)	15(23.4%)
		FUNAAB	50(15.8%)	85(26.8%)	21(6.6%)	63(19.9%)	98(30.9%)
3	OPAC (Online Public Access Catalogue)	FUTA	177(48.0%)	113(30.6%)	35(9.5%)	22(6.0%)	22(6.0%)
		OAU	64(30.5%)	129(61.4%)	12(5.7%)	1(0.5%)	4(1.9%)
		UNILAG	149(61.1%)	57(23.4%	14(5.7%)	11(4.5%)	13(5.3%)
		U.I.	62(35.6%)	77(44.3%)	25(14.4%)	8(4.6%)	2(1.1%)
		FUOYE	32(50.0%)	17(26.6%)	6(9.4%)	7(10.9%)	2(3.1%)
		FUNAAB	178(56.2%)	53(16.7%)	30(9.5%)	36(11.4%)	20(6.3%)
4	CD-ROM databases	FUTA	167(45.3%)	127(34.4%)	38(10.3%)	17(4.6%)	20(5.4%)
		OAU	64(30.5%)	129(61.4%)	12(5.7%)	1(0.5%)	4(1.9%)
		UNILAG	121(49.6%)	86(35.2%)	19(7.8%)	12(4.9%)	6(2.5%)
		U.I.	80(46.0%)	73(42.0%)	16(9.2%)	2(1.1%)	3(1.7%)
		FUOYE	22(34.4%)	24(37.5%)	5(7.8%)	5(7.8%)	8(12.5%)
		FUNAAB	116(36.6%)	105(33.1%)	33(10.4%)	42(13.2%)	21(6.6%)
5	E-thesis	FUTA	151(40.9%)	131(35.5%)	48(13.0%)	17(4.6%)	22(6.0%)
		OAU	164(78.1%)	38(18.1%)	5(2.4%)	2(1.0%)	1(0.5%)
		UNILAG	128(52.5%)	72(29.5%)	23(9.4%)	17(7.0%)	4(1.6%)
		U.I.	50(28.7%)	83(47.7%)	25(14.4%)	12(6.9%)	4(2.3%)
		FUOYE	27(42.2%)	23(35.9%)	5(7.8%)	5(7.8%)	4(6.3%)
		FUNAAB	177(55.8%)	77(24.3%)	24(7.6%)	27(8.5%)	12(3.8%)

The results of the frequency of ELRs use by the respondents on faculty basis are presented in Table 4. The findings showed that 99(17.4%) respondents from Faculty of Science used E-journals daily, followed by Faculty of Engineering 39 (8.1%). It was also revealed that Faculty of Science 96(16. 9%) used E-journals weekly, followed by Faculty of Arts. Furthermore, the result revealed that Faculty of Science 42 (20.0%) used E-journals monthly, followed by Faculty of Engineering 27 (5.6%). Faculty of Engineering 258 (53.6%) used E-journals occasionally followed by Faculty of Science 188 (33.1%).

Furthermore, the results showed that respondents from Faculty of Science had the highest frequency in the use of E-books on weekly basis, followed by Faculty of Engineering 46 (9.6%). In terms of frequency of OPAC on weekly basis, Faculty of Science 100 (17.6%) recorded

highest frequency among the universities. The result on use of CD-ROM databases on daily basis showed that respondents from Faculty of Science 36 (6.3%) had highest frequency. Respondents from Faculty of Science having the highest frequency of 51(9.0%) claimed to use E-Thesis weekly, while respondents from Social Science 68 (46.3%) used E-Thesis occasionally.

Table 4: **Frequency of use of electronic library resources by undergraduates on faculty basis**

S/n	Items	Faculty	Never used	Occasionally	Monthly	Weekly	Daily
1	E-journals	SCIENCE	131(23.1%)	188(33.1%)	54(9.5%)	96(16.9%)	99(17.4%)
		ENGINEERING	137(28.5%)	258(53.6%)	27(5.6%)	20(4.2%)	39(8.1%)
		SOC. SCIENCE	22(15.0%)	91(61.9%)	10(6.8%)	16(10.9%)	8(5.4%)
		ARTS	27(14.8%)	91(50.0%)	18(9.9%)	23(12.6%)	23(12.6%)
2	E-books	SCIENCE	67(11.8%)	172(30.0%)	46(8.1%)	100(17.6%)	183(32.2%)
		ENGINEERING	83(17.3%)	191(39.7%)	32(6.7%)	46(9.6%)	129(26.8%)
		SOC. SCIENCE	17(11.6%)	53(36.1%)	12(8.2%)	21(14.3%)	44(29.9%)
		ARTS	16(8.8%)	66(36.3%)	17(9.3%)	21(11.5%)	62(34.1%)
3	OPAC (Online Public Access Catalogue)	SCIENCE	250(44.0%)	157(27.6%)	88(15.5%)	41(7.2%)	32(5.6%)
		ENGINEERING	279(58.0%)	152(31.6%)	24(5.0%)	18(3.7%)	8(1.7%)
		SOC. SCIENCE	77(52.4%)	54(36.7%)	5(3.4%)	10(6.8%)	1(0.7%)
		ARTS	91(50.0%)	61(33.5%)	13(7.1%)	11(6.0%)	6(3.3%)
4	CD-ROM DATABASES databases	SCIENCE	247(43.5%)	149(26.2%)	81(14.3%)	55(9.7%)	36(6.3%)
		ENGINEERING	284(59.0%)	146(30.4%)	20(4.2%)	18(3.7%)	13(2.7%)
		SOC. SCIENCE	68(46.3%)	60(40.8%)	6(4.1%)	7(4.8%)	6(4.1%)
		ARTS	63(34.6%)	91(50.0%)	15(8.2%)	5(2.7%)	8(4.4%)
5	E-thesis	SCIENCE	210(37.0%)	194(34.2%)	72(12.7%)	51(9.0%)	41(7.2%)
		ENGINEERING	199(41.4%)	211(43.9%)	34(7.1%)	21(4.4%)	16(3.3%)
		SOC. SCIENCE	55(37.4%)	68(46.3%)	10(6.8%)	6(4.1%)	8(5.4%)
		ARTS	57(31.3%)	94(51.6%)	10(5.5%)	7(3.8%)	14(7.7%)

Test of hypotheses
This section presents the results of the five null hypotheses tested in the study at 0.05 level of significance as follows:

Hypothesis 1: There is no significant relationship between undergraduates' age and use of electronic library resources
The null hypothesis was tested using Pearson's correlation method and the result is presented in Table 5.

Table 5: **Relationship between age and use of electronic library resources**

Variable	Mean	SD. Dev.	n	r	P-value	Remark
Use of electronic resources	35.63	8.04	1378	.151*	.000	Sig.
Age	21.67	3.13				

* Sig. at 0.05 level

Table 5 showed the relationship between undergraduates' demographic (age) and use of electronic library resources. Since r = .151, n= 1378, P (.000) <0.05), it implies that a positive significant relationship occurred between undergraduates' age and use of electronic library resources. Hence, the null hypothesis is rejected. Therefore, age of the respondents influenced the use of electronic resources in the study.

Hypothesis 2: There is no significant relationship between undergraduates' gender and use of electronic library resources

The null hypothesis was tested using Pearson's correlation method and the result is presented in Table 6.

Table 6: **Relationship between gender and use of electronic library resources**

Variable	Mean	SD. Dev.	n	r	P-value	Remark
Use of electronic resources	35.63	8.04	1378	.027	.283	Not Sig.
Gender	1.32	0.47				

* Sig. at 0.05 level

Table 6 revealed the significant relationship between undergraduates' gender and use of electronic library resources. It shows r = .027, n= 1378, P (.283) > 0.05, which implies that there was no significant relationship between undergraduates' gender and use of electronic library resources. Hence, the null hypothesis is accepted. Therefore, gender of the respondents did not influence the use of electronic resources in the study.

Hypothesis 3: There is no significant relationship between undergraduates' academic discipline and use of electronic library resources

The null hypothesis was tested using Pearson's correlation method and the result is presented in Table 7.

Table 7: **Relationship between academic discipline and use of electronic library resources**

Variable	Mean	SD. Dev.	n	r	P-value	Remark
Use of electronic resources	35.63	8.04	1378	.023	.404	Not Sig.
Academic discipline	1.96	1.02				

*Sig. at 0.05 level

Table 7 showed the relationship between undergraduates' academic discipline and use of electronic library resources. The result r = .023, n= 1378, P (.404) > 0.05 indicated that there was no significant relationship between undergraduates' academic discipline and use of electronic library resources. Hence, the null hypothesis accepted. Therefore, academic discipline of the respondents did not influence the use of electronic resources in the study.

Hypothesis 4: Age, gender and academic discipline would have no relative significant influence on use of electronic library resources

The hypothesis was tested using regression analysis and the result is summarised in Table 8.

Table 8: Relative contribution of age, gender and academic discipline to use of electronic library resources

Model	Unstandardized Coefficient		Standardized Coefficient	t	Sig.
	B	SD. Error	Beta Contribution		
(Constant)	25.877	1.696		15.262	.000
Age	.397	.069	.154	5.778	.000
Gender	.545	.464	.032	1.176	.240
Academic discipline	.217	.212	.028	1.021	.308

Table 8 showed the relative contribution of the independent variables, that is, age, gender and academic discipline to use of electronic library resources of the respondents expressed in beta weights: Age made the most significant contribution ($\beta = .154$, $P < .05$), while Gender ($\beta = .032$, $P > .05$) and Academic discipline ($\beta = .028$, $P > .05$) were not significant. This implies that under the relative contributions, age of the respondents made the most significant contribution on undergraduates' use of electronic library resources while gender and academic discipline did not.

Discussion of findings

The study examined demographic variables (age, gender) and academic discipline as determinants of undergraduates' use of electronic library resources in federal universities in South-west, Nigeria. The findings revealed that majority of the respondents were found in the age bracket of 20-22 years. The result is in conformity with that of Daramola (2016) whose study revealed that the respondents were relatively young with a mean age of 22 years. The findings also revealed a dominance of male over the female undergraduates in the faculties studied. The result is in consonance with the previous finding by Okiki and Ashiru (2011) who found in their study more male (53.82%) than female (46.18%). However, the result obtained in this study contradicts those of Ukachi (2013); Ebijuwa (2018) whose studies had more female than male students.

The result on the purpose of use of electronic library resources by undergraduates revealed that respondents used electronic library resources for various academic purposes such as to update knowledge in subject areas of interest; to do class assignments; for current awareness; to search for scholarship opportunities; to source materials for research/writing project; to follow blog discussion and to retrieve current literature for studies. The result is in tandem with the previous findings. The findings of Owolabi, Idowu, Okocha and Ogundare (2016) established that the main purpose for electronic library resources use was to support their academic course works, online application/registration, research, communication with friends and colleagues, sourcing for materials for project writing, complete assignments and for other personal purposes. The result is also in conformity with the submission of Omosekejimi, Eghworo, Ogo (2015) who discovered that a large proportion of the respondents used the electronic resources mostly for research, assignment, current awareness, information acquisition, and e-mail and news

acquisition. The result obtained in this study is however contrary to the finding of Thanuskodi (2012) which revealed that the majority of the users use electronic resources for writing papers. As this study found that they used electronic library resources for various academic purposes.

In addition, the result of the frequency of ELRs used indicated that the frequency of use varies among the respondents. Although the finding revealed that majority of the undergraduates used ELRs most on daily and weekly basis. This finding is in tandem with that of Ankrah and Acheampong (2017) whose study found that most respondents used the e-resources on a weekly basis. Similarly the finding supports that of Madhusudha's (2010) finding that 62% (a clear majority) of respondents used e-resources on a daily basis. However, the finding indicated that undergraduates used E-thesis more frequently than the rest of the ELRs. The result on frequency of ELRs use indicated that undergraduates used E-thesis more frequently than the rest of the ELRs. This result is expected considering the fact that E-theses are major sources of primary research output which are openly accessible online from institutional repository and readily searched. E-thesis enables access to more information vital for academic and research activities. However, the findings revealed that respondents at Federal University of Agriculture, Abeokuta (FUNAAB) used the ELRs more frequently than the rest of the universities studied.

The finding further revealed that the use of ELRs varied according to the faculties (academic discipline) of the respondents. This finding corroborates that of Wu and Chen (2012) and Jara, Clasing, González, Montenegro, Kelly, Alarcón, Sandoval and Saurina (2017) who noted that electronic resources use by university students did not follow a common pattern but instead varied across disciplines. The result revealed that the Faculty of Science used E-journals, E-books, CD-ROM databases, OPAC and E-thesis more frequently than the faculties of Arts, Social science and Engineering. Thus, the study is in agreement with that of Jantti and Cox (2013) discovered that library resources were accessed mostly by the faculty of sciences, while the least access was found in health and behavioural sciences. Similarly, Wu and Chen (2017) remarked that humanities students found e-resources less important than the students of other disciplines.

The test of relationship between academic discipline and electronic library resources use by undergraduates demonstrated no significant relationship between academic discipline and electronic library resources use. In this case, the study established that there is no critical bond between academic discipline and electronic library resources use by undergraduates. This implies that, the undergraduates' academic discipline did not influence the use of electronic resources in the study. The verdict of this study authenticates those of Emwanta and Nwalo (2013) and Jara, Clasing, González, Montenegro, Kelly, Alarcón, Sandoval and Saurina (2017) who found no significant relationship between students use of electronic resources and subject background.

The result revealed that under the relative contributions, age of the respondents made the most significant contribution on undergraduates' use of electronic library resources while gender and academic discipline did not. The finding corroborates previous findings by Sarasvady and Khatri (2015) and Omosebi and Okhakhu (2017) that age is a predictor of use of electronic resources.

Conclusion

The study revealed that E-thesis was more frequently used by the undergraduates than the rest of the electronic library resources, while the respondents from Federal University of Agriculture, Abeokuta used the electronic library resources more frequently than the rest of the universities studied. Furthermore, age influenced undergraduates' use of electronic library resources. Gender and academic discipline did not have effect on undergraduates' use of electronic library resources.

Undergraduates used electronic library resources for academic purposes and the frequency of use varies among them. Majority of the undergraduates used electronic library resources mostly on daily and weekly basis and Federal University of Agriculture, Abeokuta used electronic library resources more frequently than the rest of the universities studied. Similarly, the use of electronic library resources varied according to academic discipline of the undergraduates. However, the Faculty of Science used electronic library resources more frequently than the faculties of Arts, Social science and Engineering.

While age influenced the use of electronic library resources, gender and academic discipline did not have effect on undergraduates' use of electronic library resources. However, under the relative contributions, age made the most significant contribution on undergraduates' use of electronic library resources while gender and academic discipline did not.

Recommendations

Based on the findings of the study, the following recommendations are hereby made to improve the undergraduate' use of electronic library resources:

1. Undergraduates need to optimally use the ELRs provided in the University Library for the support of their educational activities. Thus, age and gender should not limit the undergraduates from effective use of electronic library resources for their study and research.

2. Library staff that provides the resources should encourage the undergraduates to explore all available ELRs and not to prefer the use of one to the rest. They can adopt various motivation strategies to promote the use of electronic library resources among the undergraduates.

3. Academic staff should endeavour to give assignments to the undergraduates that will compel them to use electronic library resources, and in turn result into frequent use of electronic library resources for learning and research.

4. University libraries should ensure that the content of electronic library resources they provide each faculty library is specific in meeting the needs of the undergraduates in such faculty. This will make the undergraduates searches easier and simpler.

5. Faculty librarians should continually market the ELRs available in their Faculty Library and also sensitize their faculty undergraduates on the relevance of these resources to their academic activities. Furthermore, they should carry out periodic assesment of these resources to find out how it is being used.

6.   The University management should provide more ELRs and infrastructure that could give a wider access of ELRs to the undergraduates. In addition, they should not limit accessibility of ELRs to the university library alone but should make wireless Internet connection available to the undergraduates on campus to ensure seamless access.

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