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September 2019

# Academic Disciplines and Use of Library-Based Online Resources for Learning Activities by Undergraduates in University of Ibadan, Nigeria

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Oladiran, Michael and Balogun, Tolulope, "Academic Disciplines and Use of Library-Based Online Resources for Learning Activities by Undergraduates in University of Ibadan, Nigeria" (2019). *Library Philosophy and Practice (e-journal)*. 2804.  
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## **Introduction**

Academic disciplines have been shown to influence the relationship of academics to knowledge, the relationship of students at undergraduate and postgraduate levels to teaching staff and the type of knowledge that students are expected to gain about their subject or discipline area. Beyer & Lodahl (2009) pointed out that academic disciplines provide the framework for a students' programme in the university, and as such, academic world inhabited by scholars. Academic disciplines have a community of scholars with a tradition of inquiry into a particular topic of study. Abbott (2001) viewed an academic discipline or field of study as a branch of knowledge that is taught and researched as part of higher education. Academic disciplines vary between well-established ones that exist in all universities and have well defined roasters of journals and conferences and nascent ones supported by only few universities and publications. Academic discipline provides the framework for a student programme in universities, and as such, defines the academic world inhabited by scholars. Academic discipline is an important basis for determining university structure.

Funding bodies such as the Federal Ministry of Education in Nigeria introduced the Virtual Library Project, which pulls together resources electronically, connecting all the academic libraries in Nigeria, with the hub at the National Universities Commission (Federal Ministry of Education, 2000). The participating libraries become access points to the universal information resources. The Consortium of Nigerian University Libraries (NULIB) has subscribed to EBSCOhost. Internet portals include Access to Global Online Research in Agriculture (AGORA), Health Internetwork Access to Research Initiatives (HINARI), Online Access to Research in the Environment (OARE), Database of African Theses and Dissertation (DATAD), and many offline databases including MEDLINE. These are global information resources which could be accessed through academic library gateways.

Despite the huge benefits derived by students on high level of computer literacy, some students still have a negative perception towards the use of electronic resources let alone integrate them into learning process because they lack patience and experience, thus they become frustrated. The growth in online resources for learning in which education is delivered and supported through computer networks such as the Internet, has posed new challenges for library services. Library-based online resources are increasingly available in Nigerian universities thereby making it possible for students to access and use current and relevant literature for studies and research. Over the last decade, a significant transformation has been noticed in collection development policies and practices. Print medium is increasingly giving way to the electronic form of materials (Sharma, 2009). With the introduction of Information and Communication Technology facilities in the universities, information dissemination among the university communities has been tremendously enhanced. Kyrillidou (2008) believes that libraries are the crucible of genius and they are fundamental to the intellectual experience and natural activity of the mind. Indeed, there are no great universities without great libraries.

## **Review of Related Literature**

Chan & Law (2008) stated that withdrawal and social problems, time management and performance, and reality substitution were the major factors affecting academic discipline

variations among undergraduate students. Tenopir (2003) found that factors such as subject discipline, status, gender and age are some of the important factors that influence the use of online resources and digital libraries. He went further to explain that the scholar's academic discipline appears to be one of the most important of all the factors that influence the use of electronic library use. He also showed that the use of electronic journals varied with the purpose of use such as research and teaching. In the same vein, unrelated course materials, inconvenient course schedules, lack of incorporation of educational technology into lecture room instructions, poor teaching methods of the lecturers, and learning environment affects the students' attitude to academic disciplines (Chan & Law, 2008). Fatoki (2004) submits that "academic libraries work together with other members of their institutional communities to participate, support, and achieve the educational mission of their institutions by teaching and learning the core competencies of information literacy abilities involved in identifying need, accessing needed information, evaluating, managing and applying information, and understanding the legal, social, and ethical aspects of information use". A well established library is essential for any academic institution.

With the advent of the Internet, people, organizations, and businesses are better informed and connected to each other than ever before (Ojo & Akande, 2005). Information that once took several processes and procedures to obtain is now readily available and easily accessible. Asani (2005) revealed that some academic libraries like that of the Universities of Ibadan, Ilorin, Jos, Lagos and Zaria subscribe to Institute for Scientific Information (ISI) and Silver Paltter Ebscohost for database CD-ROM. However, Igbeka & Okpala (2004) posited that since the 1995 introduction of CD-ROM literature search into the University of Ibadan library system, the number of users of the CD-ROM facility was still very small as against the number of registered users. They pointed that this might be due to the lack of current awareness or dissatisfaction of users.

Ojo & Akande (2005) examined students' access, usage and awareness of online information resources at the University College Hospital (UCH) Ibadan, Nigeria and revealed that the level of usage of the electronic information resources is low. A major issue identified is the lack of information retrieval skills for exploiting online resources.

The use of online resources in this age of information technology (IT) libraries in both developed and the developing countries are characterized with the provision of resources to their teeming users' online. Oduwole, Oyewumi & Oyesiku (2002) opined that online services are characterized by state of the art computer equipment which is fast at processing and retrieving information and relatively cheap to maintain.

Salaam (2007) attributed the popularity of electronic resources to flexibility in searching than their paper-based counterpart, and that they can be accessed remotely at anytime. Online resources are the electronic representation of information. They are available in various forms like e-books, digital libraries, online journal magazine, and e-learning tutors and on line test. The findings revealed that undergraduates majority of the respondents indicated that Internet was very readily available while the least indicated CD-ROM was very readily available for undergraduates use. According to Ugah (2008) online resources may include electronic journals, electronic discussions, electronic news, data archives, e-mail, chatting on the web, etc., These are the ways students source for information. Electronic information sources are a wide range of products going from electronic periodicals to CD-ROMs, from mailing list to databases, all of

them having a common feature of being used and some time modified by a computer. Oduwole, Oyewumi & Oyesiku (2002) opined that online services are characterized by state of the art computer equipment which is fast at processing and retrieving information and relatively cheap to maintain. A survey of information technology application in Nigerian University libraries carried out by Idowu & Mabawonku (1999) revealed that the electronic mail and CD-Rom database are widely used by academics and researchers. The massive storage capacity of CD-Rom databases has enabled libraries to access instantly, easily and conveniently a substantial amount of relatively current and retrospective information at a fixed predictable cost. As a result of introduction of the use of CD-ROM databases, libraries have reported an increase in the use of journal collections, inter-library loan services, and microfiche collection (Salanje, 1995). The result of a study also revealed that majority of the respondents used E-journals occasionally while the least never used E-journals. This is in line with the survey of university students' use of online resources carried out by Bar-Ilan & Fink (2005).

Online resources are useful in different academic fields and especially in education. According to Yusuf & Onasanya (2004), online resources create a way of quicker and easier access to more extensive and current information as well as providing researchers with a steady avenue for the dissemination of research reports and findings. Culp, Honey & Mandinach (2003) stressed that ICT could be used as a tool for addressing challenges in teaching and learning; a change agent, and as a central force in economic competitiveness.

Ajuwon (2003) in a study on the uptake of ICTs by health science students at the University College Hospital, Ibadan found that 57% of undergraduate students sampled could not use a computer, that the use of the database was poor, due to lack of awareness, lack of access to computers, insufficient training and the high cost of provision. Anunobi (2006) surveyed academic use of Internet facilities in the Federal University, Owerri and it showed that 87.41% use the Internet and 4.67% didn't indicate the use of internet. Osunade, Philips & Ojo (2007) studied usage of Library and the Internet in University of Ibadan. Their study revealed that the numbers of users who use the Internet are more than those who use the library. Ugboma & Edewor (2008) found that e-mail is heavily used in provision of the following library and information services for order inquiries, selection of relevant information materials, contacting publishers and vendors. Other services include receiving and answering users' queries as well as receiving and mailing catalogues/bibliographies.

According to Manda & Mulkangara (2007), gender is associated with the use of e-resources. Hunley *et al.* (2005) found that males were more skilled than females at navigating the web in their study on the internet use among selected institutions in the United States of America. Selwyn (2008) in his study of undergraduate's academic use of the internet in some selected UK higher educational institutions reported that gender and course affected the use of internet. Malaney (2005) in the study of the use of internet by undergraduates at a public research university stated that males and females spend about the same amount of time online, but their use of the internet differs. Amkpa (2007) observed that male and female students differ significantly in their attitudes towards computer applications which definitely have adverse effect on their job opportunities after graduation.

## Objectives of the Paper

The general objective of this paper is to examine the influence of academic disciplines on use of library-based online resources for learning activities by undergraduate students in University of Ibadan. The specific objectives are to:

1. Find out the online resources at Kenneth Dike Library that are available to undergraduates of the University of Ibadan.
2. Ascertain the frequency of use of library-based online resources by undergraduates of the University of Ibadan.
3. Find out the purposes for which undergraduates use library-based online resources at Kenneth Dike Library, University of Ibadan.
4. Find out the challenges undergraduates of University of Ibadan encounter in utilizing library-based online resources.

## Methodology

The study adopted a quantitative research paradigm and it employed the survey research strategy in the collection of data. The study population for this study comprises of all the registered regular undergraduates of the University of Ibadan. The total population of the University of Ibadan undergraduates is 12,173.

However, a stratified, proportionate, random sampling technique was used to select the sample size for this study. The stratification in this study is on faculty basis in the University of Ibadan. The sampling fraction used for this study is 2.5%. Therefore, the sample size for the study is three hundred and three (303) undergraduates as follows:

**Table 1**      **Sample Size of the Study**

<b>Faculties</b>	<b>Population (Undergraduates)</b>	<b>Sample Size (2.5%)</b>
<b>Agriculture and Forestry</b>	1296	32
<b>Arts</b>	1486	37
<b>Basic Medical Sciences</b>	315	8
<b>Clinical Sciences</b>	773	19
<b>Dentistry</b>	157	4
<b>Education</b>	1586	40
<b>Law</b>	685	17
<b>Pharmacy</b>	388	10
<b>Public Health</b>	127	3
<b>Sciences</b>	2131	53
<b>Technology</b>	1333	33
<b>The Social Sciences</b>	1479	37
<b>Veterinary Medicine</b>	417	10
<b>Total</b>	<b>12,173</b>	<b>303</b>

## Demographic Information of Respondents

The demographic information of the respondents with respect to faculties, gender and level of study are as follows:

**Table 2      Distribution of Respondents by Faculties**

<b>Faculties</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Agriculture and Forestry</b>	19	6.6
<b>Arts</b>	19	6.6
<b>Basic Medical Sciences</b>	19	6.6
<b>Clinical Sciences</b>	20	7.0
<b>Dentistry</b>	20	7.0
<b>Education</b>	20	7.0
<b>Law</b>	31	10.8
<b>Pharmacy</b>	16	5.6
<b>Public Health</b>	19	6.6
<b>Sciences</b>	20	7.0
<b>Technology</b>	23	8.0
<b>Social Sciences</b>	30	10.6
<b>Veterinary Medicine</b>	30	10.6
<b>Total</b>	<b>286</b>	<b>100.0</b>

Table 2 shows that 286 questionnaires were correctly completed and returned accounting for approximately 94.4% response rate. 17 questionnaires were not analyzed as some they were either completely incorrectly or not returned to the researcher by the students. The Faculty of Law had the highest number of respondents with 31 respondents which is 10.8% of the total population. This was followed by the faculties of Social Sciences and Veterinary Medicine with 30 respondents each and is 10.6 percent of the total population (each). The least were from the faculty of Pharmacy with 16 respondents (5.6%) of the studied population.

**Table 3      Distribution of Respondents by Gender**

<b>Sex</b>	<b>Frequency</b>
<b>Male</b>	150
<b>Female</b>	136
<b>Total</b>	<b>286</b>

Table 3 shows that there are a higher percentage of male respondents in the study with 150 (52.4%) of the population while 136 (47.6%) were female. Although there seems to be more male undergraduate students at the University of Ibadan, there is no significant difference between response rate of male and female undergraduate students at the institution as shown in the table above.

**Table 4      Distribution of Respondents by Level**

<b>Level</b>	<b>Frequency</b>	<b>Percentage</b>
<b>100</b>	41	14.3
<b>200</b>	50	17.5
<b>300</b>	54	18.9

<b>400</b>	71	24.8
<b>500</b>	47	16.4
<b>600</b>	23	8.1
<b>Total</b>	<b>286</b>	<b>100.0</b>

As presented in Table 4, the 400 level has the highest number of respondents in the study with 71 (24.8%). This is followed by 300, 200 and 500 levels with 54 (18.9%), 50(17.5%) and 47 (16.4%) respectively. The 600 level has the least respondents with 23 (8.1%). This is followed by 100 level students with 41 (14.3%).

## Findings

The following are the findings of the study.

**Table 5 Availability of Library-based Online Resources**

<b>Online Resources</b>	<b>Very Available</b>		<b>Readily Available</b>		<b>Not Readily Available</b>		<b>Not Available</b>	
	<b>Number</b>	<b>%</b>	<b>Number</b>	<b>%</b>	<b>Number</b>	<b>%</b>	<b>Number</b>	<b>%</b>
<b>E-Journals</b>	78	27.3	97	33.9	59	20.6	52	18.2
<b>E-Books</b>	81	28.3	97	33.9	55	19.2	53	18.3
<b>CD-ROM</b>	74	25.9	91	31.8	57	19.9	64	22.4
<b>Online Databases</b>	91	31.8	83	29.0	57	19.9	55	19.3
<b>OPAC</b>	83	29.0	88	30.8	54	18.9	61	21.3
<b>Internet</b>	121	42.3	60	21.0	54	18.9	51	17.8

Table 5 reveals that the Internet is the most available e-resource to students for retrieval of academic materials. 181 students which is approximately 63.3% agreed that the internet is available for them to retrieve information. Although some students believe that the internet is not readily available, it is evident that it is the most preferred medium for information retrieval.

**Table 6 Frequency of Use of Online Resources**

<b>Online Resources</b>	<b>Daily</b>		<b>Weekly</b>		<b>Monthly</b>		<b>Occasionally</b>		<b>Never</b>	
	<b>No</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
<b>E-Journals</b>	72	25.2	59	20.6	56	19.6	78	27.3	21	7.3
<b>E-Books</b>	68	23.8	58	20.3	55	19.2	62	21.7	43	15.0

<b>CD-ROM</b>	60	21.0	56	19.6	51	17.8	65	22.7	54	18.9
<b>Online Database</b>	73	25.5	61	21.3	27	9.4	67	23.4	58	20.4
<b>OPAC</b>	71	24.8	56	19.6	34	11.9	60	21.0	65	22.7
<b>Internet</b>	69	24.1	59	20.6	54	18.9	62	21.7	42	14.7

Table 6 revealed that E-journal is the most frequently used online resource with 187 (65.4%) ranging from once a day to at least once a month. This is followed by the Internet (63.6%), E-books (63.3), CD-ROM (58.4%), OPAC 56.3%) and online database (56.2%) respectively. Also, the table also shows that there is no significant difference in the use of the online resources and students tend to use them all almost at the same rate. However, students who have never used E-journals seem to be significantly smaller with 21 (7.3%) than other online resources, the internet follows with 42 (14.7%).

**Table 7 Use of Library-Based Online Resources**

<b>Online Resources</b>	<b>Strongly Agree</b>		<b>Agree</b>		<b>Disagree</b>		<b>Strongly Disagree</b>	
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
<b>Assignment</b>	78	27.3	91	31.8	59	20.6	58	20.3
<b>Research</b>	74	25.9	93	32.5	63	22.0	56	19.6
<b>Term Paper</b>	69	24.1	98	34.3	61	21.3	58	20.3
<b>Seminar</b>	67	23.4	94	32.9	65	22.7	60	21.0
<b>Class work</b>	70	24.5	90	31.5	62	21.7	64	22.3
<b>Preparing for exams</b>	73	25.5	93	32.5	59	20.6	61	21.4
<b>Preparing lecture notes</b>	67	23.4	91	31.8	63	22.0	65	22.8

Table 7 reveals that more students agreed to the use of library-based online resources for the purpose of writing assignments, conducting research, term paper, for seminars, class work, preparation for exams and the preparation of lecture notes as listed on the table above. However, there is no significant difference between the number of students who make use of these resources and those who do not make use of it. The total average of 164 (57.34%) of the undergraduate students strongly agree/agree that they make use of library-based online resources for their school work while an average of approximately 131 (42.7%) do not make use of the library-based online resources. This data shows that a large percentage of the students do not make use of the online resources.



**Table 8 Challenges to the Utilization of Library-Based Online Resources**

Online Resources	Strongly Agree		Agree		Strongly Disagree		Disagree	
	No.	%	No.	%	No.	%	No.	%
Poor Internet connectivity	81	28.3	75	26.2	56	19.6	74	25.9
Lack of relevant electronic resources in my discipline	60	20.9	63	22.0	76	26.6	87	30.5
Difficulty to access	59	20.6	75	26.2	72	25.2	80	28.0
Erratic power supply	69	24.1	80	27.9	64	22.4	73	25.6
No assistance from the library staff	76	26.6	89	31.1	58	20.3	63	22.0
Costly to access and use	62	21.7	64	22.4	77	26.9	83	29.0
Lack of technical know-how	58	20.3	76	26.6	69	24.1	83	29.0
Lack of training and support of staff and users	54	18.9	73	25.5	72	25.2	87	30.4
Inability to access the available electronic database	57	19.9	77	26.9	69	24.1	83	29.1
Technological Constraints	63	22.0	82	28.7	61	21.3	80	28.0
Lack of ICT skills	55	19.2	80	28.0	75	26.2	76	26.6
Social factor	62	21.7	78	27.3	69	24.1	77	26.9
Malfunction of the computers to access online resources	64	22.4	77	26.9	73	25.5	72	25.2

Table 8 reveals that the major challenge in the Utilization of Library-Based Online resource is lack of assistance from the library staff with a total of 165 (57.7%) of the students affirming this by agreeing to this. The least challenge faced by the students as indicated on the table above is lack of relevant discipline specific electronic resources with a total of 163 (57.1%) disagreeing that it was a challenge in their use of library-based online resources.

### Discussion of Findings

Academic disciplines provide the framework for a student programme in university, and this defines the academic world inhabited by scholars. The emergence of online resources has cut the barrier to valuable information resources which until now were difficult to access especially by scholars in the developing nations of the world. Salaam (2007) attributed the popularity of electronic resources to flexibility in searching than their paper-based counterpart, and that they can be accessed remotely at anytime. Online resources are the electronic representation of

information. They are available in various forms like e-books, digital libraries, online journal magazine, and e-learning tutors and on line test.

The findings revealed that undergraduates majority of the respondents indicated that Internet was very readily available while the least indicated CD-ROM was very readily available for undergraduates use. According to Ugah (2008) online resources may include electronic journals, electronic discussions, electronic news, data archives, e-mail, chatting on the web, etc., These are the ways students source for information. Electronic information sources are a wide range of products going from electronic periodicals to CD-ROMs, from mailing list to databases, all of them having a common feature of being used and some time modified by a computer. A survey of information technology application in Nigerian University libraries carried out by Idowu & Mabawonku (1999) revealed that the electronic mail and CD-ROM database are widely used by academics and researchers. The massive storage capacity of CD-ROM databases has enabled libraries to access instantly, easily and conveniently a substantial amount of relatively current and retrospective information at a fixed predictable cost. As a result of introduction of the use of CD-ROM databases, libraries have reported an increase in the use of journal collections, inter-library loan services, and microfiche collection as reported by Salanje (1995).

The result of the study also revealed that majority of the respondents used E-journals occasionally while the least never used E-journals. This is in line with the survey of university students' use of online resources carried out by Bar-Ilan & Fink (2005). The use of a journal is not necessarily an indication of the preference of these university students. There may be an increase in the acceptance and frequency of use of the electronic format merely because the traditional print format is no longer easily available; and when respondents were asked about the advantages of electronic resources, accessibility and desktop access, home access, ease of retrieval and hyperlinks to outside content were the arguments cited most often.

On the purpose of using library-based online resources among undergraduates, the study found out that online resource was used for different purposes. In the year 2000, JSTOR executed a survey of 32,000 humanities and social science faculty in US. Thirty-four hundred (10%) of the surveys were returned. More than 60% of respondents indicated that they were comfortable using online resources, although e-journals were not included in the list of most valuable resources. The most popular online resources were online catalogs, full-text electronic journal databases, and abstracting and indexing databases which were used for research purpose and term papers.

Undergraduates' responses on the challenges encountered in the utilization of library-based online resources showed that majority of the respondents indicated no assistance from the library staff while the least was lack of training and support of staff and users. This corroborated the findings of Watts & Ibegbulam (2006) examined some of the barriers to the usage of electronic information resources available at the medical library of College of Medicine, University of Nigeria, Nsukka. Their findings reveal that lack of an adequate ICT (information and communication technology) infrastructure and affordable online access, absence of in-depth ICT skills and information searching skills among library staff and cost of using the cybercafé are barriers to the use of electronic resources. Furthermore, Oduwole & Sowole (2006) identified problems in the adoption and usage of ICT and online resources in Nigeria. These include lack of adequate ICT skills among staff and users, low basic information literacy levels in the Nigerian population, and prohibitive cost in developing countries to gain access to internet through cybercafé.

## Conclusions and Recommendations

The ever growing usage of online resources among undergraduate students assists in teaching, learning and research. The rapid growth of Information and Communication Technologies is changing the way academic libraries operate in this digital age. It is evident from the findings that students in University of Ibadan make use of library-based online resources for assignments, term paper, and project work this was indicated in their responses as against other specified purposes that was least used.

Institutions should make efforts to improve access to the Internet and ensure that there is constant electricity supply within the school premises. Institutions can also develop software applications and websites that can assist students with their school work which will help their academic performance. University administrators and library management should make efforts to improve on the bandwidth and enhance connectivity so as to enable students have easy access to the Internet at any particular point in time. Adequate provision should be made for alternative source of power generation in order to solve the problem of erratic and epileptic power supply which is hindering the effective use of online resources in the libraries.

In conclusion, further research should be carried out on the awareness and use of scholarly e-resources by undergraduate students at the University of Ibadan. Due to the observed weakness of the questionnaire in conducting a study like this, further research should consider the adoption of other research methods and data collection tools. Qualitative research with the use of data collection instruments like interview and focus groups would be important in evaluating the students' knowledge and understanding of library-based e-resources.

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