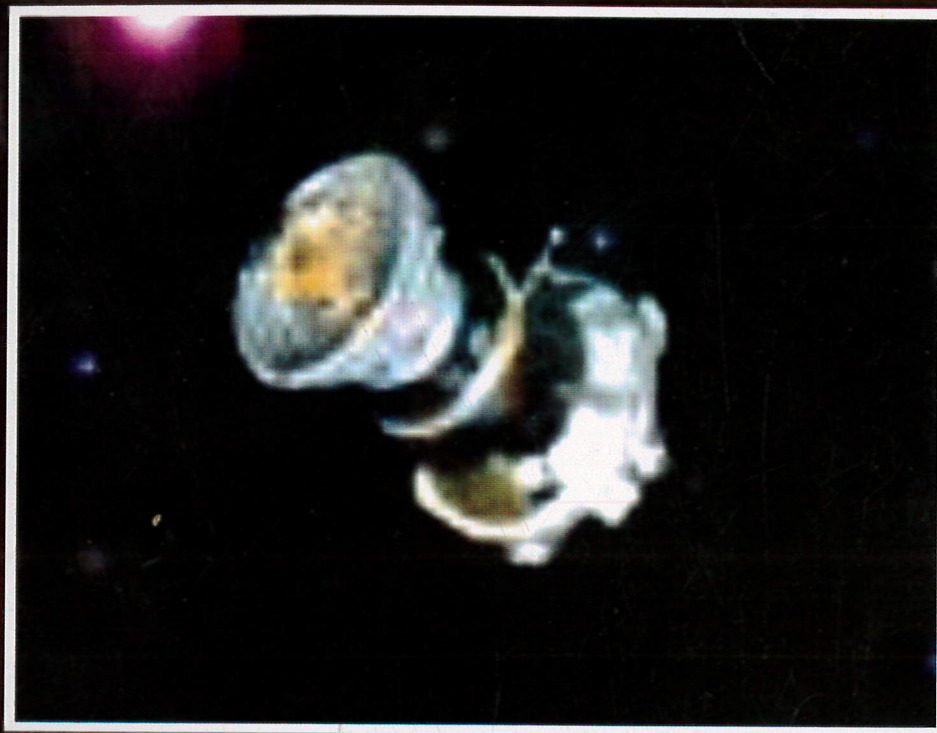


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OBJECTIVES AND SCOPE

The Information Technologist: An International Journal, of Information Communication Technology (ICT) is a referred Journal by Nigerians and foreign renowned Scholars who have distinguished themselves in the field of Library, Information, and Communication Technology (ICT)

Essentially the journal concerns itself with the pervasive impact and the changes in the basic character of library and information operations and services occasioned by the use of technology.

The journal deals mainly with the publication of the results of empirical research in the field of Library, Information Science Communication and Information Technology as they affect Developing Countries. The journal is also devoted to articles of high quality on the theoretical aspects of its area of concern. Book reviews, letters to the editor, news items and other brief communications are also welcome.

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An International Journal of ICT

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This is the JUNE issue of our journal, *The Information Technologist: An International journal of Information and Communication Technology; (ICT), Volume 18, Number 1, 2021*. The editorial board members heartily congratulate our distinguished contributors, subscribers and users. We appeal to our contributors whose articles have not been positively considered in this issue not to be discouraged.

The journal's insistence on high quality articles which is a function of the peer review mechanism has earned her acceptance the world over. We will continue to ensure that the peer review procedures are greatly accelerated, and our practice of disposing off manuscript within a time frame of not more than one month of submission is also assured.

It is the hope of the members of the Editorial Board that this standard will be maintained and the regularity of the appearance sustained.

In this issue, we have articles which explored the possibility of the profession of library and information technology reaching out beyond its present confines.

Our lead paper by Caroline Aboagye Da-Costa, Fausta Kilian Ganaa and Ephraim Nana Apeakoran used qualitative design, to analyse the strategic brand positioning of selected traditional media in Ghana.

In their study, Dr. Katamba Abubakar Saka, Dr. Abdulganiy Okanla Ahmed and Professor Philip Usman Akor highlighted the issues of transformation from Manual to digital form of information service delivery through the use of computers and other Information and Communication Technology (ICT) facilities.

The article by Dr. Abdulmumin Isah, Dr. Abdulsalam Abiodun Salman and Adekunle Daniel Adekeye investigated the perceptions of LIS educators on the integration of a technology-driven curriculum in library schools.

Dr. (Mrs.) Ijeoma Nneamaka Ezebuio in her paper, investigated the "Impact of Accreditation ries in South East Nigeria.

The research exercises on the provision of Quality Information and Infrastructural Resources in University Librah by Philip Chike Chukwunonso Aghadiuno, Ngozi C. Uzoagba and Nnamdi Emmanuel Onyekweodiri investigated awareness, attitude and impact of COVID-19 on Librarians in Academic Libraries in Nasarawa State Nigeria

Professor (Mrs) Nonyelum P. Okpokwasili and Dolly C. Kalu in their article investigated the effect of laissez-faire leadership style on subordinates' job performance in academic libraries in Port Harcourt, Rivers State, Nigeria.

The article by Dr. Cajethan Anumkua, Dr. Humphery Igwechi Wiche, Dr. Emmanuel Okwu and Innocent Chima Mmejim investigated the impacts of environmental pollutants on school library resources in Ohaji/Egbema Local Government Area of Imo State, Nigeria.

Dr. (Mrs.) Ngozi Chima-james in her study determined the extent of awareness and adoption of the UNESCO conservation guidelines, preservation practices among the library staff. in the South -Eastern Nigerian Universities.

The research by Dr. Cajetan Okechukwu Onyeneke examined awareness and use of open access publishing platforms by faculty members of Imo State University, Owerri (IMSU).

In their article, Augustine Uzoma Madu, Anthonia Peace Joel and Peter Yohana Mshelia determined the level of perception of the effect of information resources awareness, availability and accessibility on the control of covid-19 pandemic among Librarians in Nigeria.

In their research, Dr. A.O. Enikuomelin and Rebecca Temitope Oladeyi presented the understanding of the suitability of the use of gradual element approach in an Information Retrieval schemes.

The study by Rosemary Chinenye Abanum, Dr.(Mrs) Ifeyinwa blessing Okoye, Nkechinyere Ezinne Ezenwa and Emmanuela Chibure Anyakwo investigated disaster management practices in University Libraries in South-East, Nigeria.

The research by Dolly C. Kalu and Professor (Mrs) Nonyelum P. Okpokwasili focused on leadership style and Subordinates' Job Performance in Academic Libraries in Port Harcourt, Rivers State, Nigeria.

In their article, Obiageli F. Mbajorgu and Ifunanya Virginia Ubochi examined influence of information literacy skills on utilization of library resources and services by students of tertiary institution in Owerri, Imo State, Nigeria.

The study by Dr.Abdulmumin Isah, Dr. Abdulsalam Abiodun Salman and Kudirat Olawumi Salami investigated the perceived usefulness and ease of use of Online Public Access Catalogue (OPAC) among undergraduates in Kwara state, Nigeria.

Finally, we once more sincerely appreciate our numerous contributors and subscribers and wish all our readers well.

Evarest C. Madu Ph.D (Ibadan), Ph.D (Nigeria) MLS(Ibadan) MCILIP, B.Sc (Ibadan)MNIM, MNLA,CLN.

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PERCEIVED USEFULNESS AND EASE OF USE OF OPAC AMONG UNDERGRADUATES IN SELECTED UNIVERSITIES IN KWARA STATE

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Kudirat Olawumi Salami***

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Abstract

The purpose of this study is to investigate the perceived usefulness and ease of use of Online Public Access Catalogue (OPAC) among undergraduates in Kwara state, Nigeria. The study specifically examined the perception of undergraduate students in University of Ilorin and Kwara State University about OPAC; ascertain the frequency of use of OPAC by undergraduate students in University of Ilorin and Kwara State University; investigate the perceived usefulness of OPAC among the undergraduate students in University of Ilorin and Kwara State University; examine the perceived ease of use of OPAC among the undergraduate students in University of Ilorin and Kwara State University; and identify challenges that undergraduate students in University of Ilorin and Kwara State University encountered while using OPAC. The research adopted survey method and employed stratified sampling technique to select 504 undergraduates as its sample from the population consisting of undergraduate students of University of Ilorin and Kwara state University. A self designed questionnaire tagged as "Questionnaire on Perceived Usefulness and Perceived Ease of Use of OPAC among Undergraduate Student". Out of 504 copies of the questionnaire administered, 493 copies were returned and properly filled to give 97.8% return rate. The data collected was analyzed using descriptive statistics of frequency and counts percentages while t-test

and Pearson Product Moment Correlation was used to test the hypotheses. The study revealed that there is a great relationship between perceived ease of use and the use of OPAC. Furthermore, the study found that there is a significant difference in the perception of male and female undergraduate students in University of Ilorin and Kwara State University about the OPAC. The study concluded that undergraduate students had positive perception about the usefulness and ease of use of OPAC while lack of assistance from library staff; unstable power supply; poor internet facility and inadequate computer terminals designated for the use of OPAC are the major challenges that undergraduate students in University of Ilorin and Kwara State University encountered while using OPAC.

Key Words: Usefulness, ease, OPAC, Universities, Undergraduates

Introduction

Throughout the world, libraries are institutions that are primarily set up to acquire, organize, store and make accessible to the users, within the quickest possible time all forms of information materials which they require (Nwalo, 2003). Therefore, for libraries to fulfill their primary goals and objectives, they acquired information resources ranges from books, manuscripts, journals and other sources of recorded information. Library collection may include use of CD-ROMs and audiotapes as well as video tapes and other forms of media resources (Gbemi-Ogunleye, 2016). In other words, libraries are mainly entrusted with a host of predetermined tasks like acquiring, organizing, preserving, retrieving and disseminating information to the users. Most importantly, one of the activities in the library is the organization of information resources which is done through cataloguing and classification (Mulla & Chandrashekar, 2009).

Organization of resources according to Islam (2011) is attained through cataloguing and classification. Classification is a part of cataloguing. As the trend continues to change for the good, technologies are employed to make access and retrieval of these information resources easy. Conceptually, cataloguing is the process of describing the information items in the library. Therefore, the end product of cataloguing is catalogue. This catalogue gives the information about the holdings of the library. This is confirmed in the work of Charles Ammi Cutter (1975) who identified

three functions of library catalogue, that is, it shows what a library has in its collection; assist in the choice of work and enable users to find book by which author; title and subject is known. Furthermore, this information access tool (catalogue) is in different forms such as card form; book form among others.

In this 21st century, the introduction of Information and Communication Technology (ICT) in the field of Libraries and Information Science (LIS) has brought a tremendous change in the techniques of access, storage, retrieval and dissemination of information resources that a library acquired to serve its users. It has also changed the ways of providing services offered to user's community. One of the areas that ICT has changed in the library is cataloguing which gave birth to Online Public Access Catalogue (OPAC). The Online Public Access Catalogue is an increasingly well known piece of equipment in libraries. Furthermore, OPAC has revolutionized traditional accessibility to resources of libraries in general and academic libraries in particular. In other words, it is an interface of information retrieval system which assists information searchers to access resources of libraries using several access points (Fabunmi & Asubiojo, 2013). These researchers explained further that most information searchers tend to use easily accessible information sources rather than sources that require considerable efforts. For instance, library users will prefer to search a database that is fast, easy and retrieve

precise records of items they actually need than surfing library manual catalogue.

Traditionally, OPAC is concerned with searching for and retrieving bibliographic records of information items instead of full-text of the content of resources. It has made searching and retrieval of bibliographic records of materials easier and faster (Fabunmi & Asubiojo, 2013). Most importantly, OPAC has changed the conventional card catalogue system to electronic ways of accessing the information materials in the library. Today, a large number of libraries have automated their operations and services using this technology to fulfill their users' needs. Public catalogue, which is an important service of the library, is not exceptional to computer technology. Computerized catalogue is termed as Online Public Access Catalogue (OPAC). In the same vein, it acts as an information retrieval system for the user which has revolutionized way to bibliographic information through search capabilities such as keyword searching, Boolean searching, truncation, proximity searching, and item identity number searching. These were not possible in the traditional catalogue. Moreover, it is expected that information searchers with access to the Internet whether at homes, offices, hostels or even on their smart mobile phones should be able to access library web-based OPAC before coming to the library to borrow their needed materials. However, a study carried out by Fabunmi and Asubiojo (2013) showed that majority of the undergraduate students in Obafemi Awolowo University, Ile-ife are using manual catalogues most often times than OPAC.

With the introduction of this tool to access information resources in the library, it is important to consider some factors that will determine the effective use of this tool (OPAC), that is, perceived usefulness and perceived ease of use. Perceived usefulness is a measure of confidence exercise by the user that the technology will enhance the work (Davis, 1989). According to Davis

(1989), the use of Perceived Usefulness dimension contains three parts: the implementation, productivity and time saving. It then implies that using Online Public Access Catalogue, users can search for information materials more quickly, enhance and facilitate productivity and more useful. On the other hand, Perceived Ease of Use (PEOU) is the level at which the user believes that using the system will save energy (Davis, 1989). According to Godwin (1987) as cited by Jimoh and Oyinlola (2013), the frequency of use and interaction between the user and the system can show the ease of use. Therefore, the perception of the undergraduate students about the usefulness of the OPAC will determine the extent to which they will use the tool. On the other, ease of use of the OPAC will also determine the extent to which the students use the system.

Based on the above submission, it can be deduced that the use of Online Public Access Catalogue largely depends on the perceived usefulness and perceived ease of use of the system. Therefore, it is against this backdrop that this study was designed to examine perceived usefulness and ease of use of OPAC among undergraduate students in the selected universities in Kwara State.

Research Questions

The following research questions guided the study:

1. what are the perceptions of undergraduate students in University of Ilorin and Kwara State University about OPAC?
2. what is the frequency of use of OPAC by undergraduate students in University of Ilorin and Kwara State University?
3. what are the perceive usefulness of OPAC among the undergraduate students in University of Ilorin and Kwara State University?
4. what are the perceived ease of use of OPAC among the undergraduate

students in University of Ilorin and Kwara State University?

5. what are the challenges that undergraduate students encountered while using OPAC?

Hypotheses

The following null hypotheses were tested at 0.05 level of significant

H₀₁ There is no significant difference in the perception of male and female undergraduate students in University of Ilorin and Kwara State University about OPAC.

H₀₂ There is no significant relationship between the perceived usefulness of OPAC and use of OPAC among the undergraduate students in University of Ilorin and Kwara State University.

H₀₃ There is no significant relationship between the perceived ease of use of OPAC and use of OPAC among the undergraduate students in University of Ilorin and Kwara State University.

Literature Review

The application of Information Communication Technology in the area of Libraries and Information Centres has undergone a enormous change in the techniques of access, storage, retrieval and dissemination of library resources to the end-users (Gohain, Anjan, Mukesh & Saikia, 2013). It has also modified the methods of providing services obtainable to user's community. Online Public Access Catalogue (OPAC) is one of the byproducts of ICT application in libraries.

Sankari, Chnnasanry, Balasuramanian and Muthuruj (2013) postulated that OPAC is an information system that contains bibliographic information of an information centre or library. It is a modern and flexible form of the catalogue usually instantaneous and sophisticated access to any recorded information within a computer. It is a computerized catalogue that acts as an information retrieval system for the user. OPAC provides access to any of the

information contained in the library beyond geographical barrier (Shivakumaraswamy & Narendra, 2016). The researchers further revealed that this technology allows users to search a document by authors, titles, subject and keywords from a terminal and also allows printing, downloading or exporting records via different electronics means.

Devandra and Khaiser (2012) described OPAC as an inventory of the stock of any library and also a tool for accessing the collection of a library seamlessly. OPAC thus provides users a means of searching and accessing information and users can see the collections and issue status of each document of the library, can reserve and renew a document of their interest when needed. With this new technology, multiple users can query the database simultaneously unlike the traditional card catalogue. According to Larson (2018) OPAC is a computerized database composed of bibliographic records describing the books and other materials owned by a library or library system via public system via public terminal. The researcher further stated that it is an essential information retrieval tool of libraries and considered as a gateway to library resources which every user should use to fulfill their information requirements. However, despite the importance of OPAC as an essential tool for easy access to library holdings, it is unfortunate that studies have shown that OPAC is underutilized library patrons. Mulla and Chandrashekara (2009) assessed the effective use of online public access catalogue (OPAC) at the libraries of engineering colleges in Karnataka. The paper examines the results from a questionnaire-based survey conducted at the libraries of engineering colleges in Karnataka. The study identified lack of awareness of user community as one of the some major constraints to the use of OPAC at the libraries of engineering colleges. The result also found that OPAC is not user friendly software. Furthermore, the result shows that Information technology (IT)

competency between user communities was lack luster. Thus, the study clearly highlighted the need for an education programme module for users to promote the effective usage of OPAC.

Narrang and Singh (2013) attempted to ascertain the use and opinion about OPAC in Bhai Gurdas Library, Guru Nanak Dev University, Amritsar by the research scholars. Findings revealed that OPAC significantly helped the users in speedily finding their required documents. In the same vein, Devendra and Nikam (2013) studied the attitudes of two law university library users towards the use of OPAC/Web OPAC and located in Andhra Pradesh. Findings of the study showed that 62(50%) of the respondents were using OPAC/Web OPAC and 51(41.8%) respondents stated that their use of the OPAC/Web OPAC was not guided by library OPAC/Web OPAC. The analysis found that respondents have positive attitudes about the use of OPAC/Web OPAC service and facility.

Ansari (2008) conducted a survey on awareness of OPAC in five Delhi libraries. The findings of the study revealed that out of 100 respondents, 28% were fully satisfied, 49% were satisfied, while 16% were rarely satisfied. The author further noted that only few 7% indicated that they were not satisfied. In the same vein, Kumar (2014) examined relationship of OPAC users' satisfaction with their demographic characteristics, computer skills, user education, user assistance and user friendly OPAC. The results of the survey indicated that only a small percentage, 22% to 25% stated they were satisfied with the use of OPAC. The findings further showed that with respect to gender-wise analysis only a small portion, 27% of males and 20.4% of female felt they were satisfied with OPAC workings.

In another dimension, Fahmi (2004) postulated that information systems are adopted because they are more easily use by users. However, Technology Acceptance Model (TAM) as advanced by Davis

(1989) identified some factors considered responsible for the acceptance of a new technology which include External variables, perceived usefulness, perceived ease of use and behavioral intention. TAM is capable of explaining the extent to which user attitudes can determine the acceptance of Information System. According to Davis (1989), Behavioral intention to use a technology is important in determining acceptance of such technology. This is because the usage level of such technology is enough to predict attitude toward the technology, the motivation to continue to use, and the desire to motivate others is essential in sustaining any new technology (Malhotra & Galleta, 1999). In this study, the behavioral intention of undergraduate students to use Online Public Access Catalogue (OPAC) will be determined by the ease of use and the usefulness, that is the benefits the benefit the undergraduate students derived from OPAC.

While many studies have employed TAM to explain technology acceptance, it has been observed that none of the previous researchers to the knowledge of the researchers had focused on perceived ease of use and usefulness of OPAC among the undergraduate students in Kwara State Universities. This is the reason why this study was set out to investigate the perceived usefulness and ease of use of OPAC among undergraduate students in University of Ilorin and Kwara State University.

Methodology

The study employed descriptive survey design. According to Orodho (2009), descriptive survey designs are used in preliminary and exploratory studies to allow the researchers to gather information about people's attitudes, opinions, habits or any other characteristics of a particular individual, group, summarize it, present and interpret the data collected for the purpose of clarification. Therefore, this research design was chosen since this study involves the collection of data from a population and describing the data collected in a systematic

manner. The target population for the study consists of all the undergraduate students in University of Ilorin and Kwara State University. According to the 2018 academic report of University of Ilorin and Kwara

State University, the total number of the undergraduate students is 40,672 and 9,632 respectively. This brings it to a total of 50,304.

Table 1: Population of Study

S /N	Institution	Population
1	University of Ilorin	40,672
2	Kwara State University	9,632
	Total	50,304

Sample size and Sampling Technique

Mugenda and Mugenda (2008) defined sampling technique as the process of selecting a portion of a population while sample size is a group or sub-group derived from the general population. The sampling technique for this study is stratified random sampling technique. This method was adopted because the study divided the population into stratum. The sample size for

this study is 504 undergraduate students out of the 50,304 population of the study premised on the Israel model sample size table (2003).

Data Presentation and Analysis

Demographic Information of the Respondents

Table 2: Demographic Information of the Respondents

Institution	Frequency	Percent
University of Ilorin	265	53.8
Kwara State University	228	46.2
Total	493	100
Gender		
Male	374	75.9
Female	119	24.1
Total	493	100.0
Age		
16-20	111	22.5
21-25	333	67.5
26-30	49	9.9
31-35	-	-
Total	493	100.0
Level of Study		
100	43	8.7
200	114	23.1
300	283	57.4
400	53	10.8
500	-	-
Total	493	100

The results in Table 4.1 revealed the demographic information of the respondents. The results showed that out of 493 respondents, 265 (53.8%) were from University of Ilorin while 228 (46.2%) were

from Kwara State University. This means that majority of the respondents were from University of Ilorin. Furthermore, the results showed that 374 (75.9%) were male while 119 (24.1%) were female. This demonstrated

that majority of the respondent were male. Based on the age distribution of the respondents, the result illustrated that 333 (67.5%) fall between the ages of 21-25 while 111 (22.5%) fall between the ages of 16-20. Next to this are the respondents that fall between the ages of 26-30 representing 49 (9.9%) while none of the respondents fall between the ages of 31-35. In summary, it can be noted that majority of the respondents fall between the ages of 21-25. Based on the academic level of the respondents, the result showed that 283 (57.4%) were in 300 level

while 114 (23.1%) were in 200 level. This is followed by the respondents that were in 400 level mounting at 53 (10.8%) while 43 (8.7%) were in 100. This means that majority of the respondents were in 300 level.

Research Question 1: What are the perceptions of undergraduate students in University of Ilorin and Kwara State University about OPAC?

Table 3: Perception of Undergraduate Students about OPAC

S/N	Perception on Online Public Access Catalogue (OPAC)	SA	A	D	SD
1	OPAC is a database of bibliographic records relating to the collection of library	256 (51.9%)	216 (43.8%)	21 (4.3%)	-
2	One of the technologies that facilitate access to any of the information restricted in the documentation for an item in the library	142 (28.8%)	337 (68.4%)	7 (1.4%)	7 (1.4%)
3	Technology that allows users to search for library resources and to find the availability of such documents in the library at a given point of time	367 (74.4%)	98 (19.9%)	21 (4.3%)	7 (1.4%)
4	Database that allow users to search information by authors, titles, subject and keywords from a computer terminal.	248 (50.3%)	237 (48.1%)	8 (1.6%)	-
5	Electronic database that is faster than the manual catalogue to locate the information resources in the library	360 (73.0%)	126 (25.6%)		7 (1.4%)

Note: SA+A=Agree while D+SD=Disagree

The results in Table 4.1 confirmed the perception of undergraduate students about OPAC. The result revealed that out of 493 respondents, 472 (95.7%) agreed that OPAC is a database of bibliographic records relating to the collection of library while 21 (4.3%) disagreed with this statement. The result also showed that 479 (97.2%) agreed that OPAC is one of the technologies that facilitates access to any of the information restricted in the documentation for an item in the library while 14 (2.8%) disagreed with this statement. Also, the result explained that 465 (94.3%) agreed that OPAC is a technology that allows users to search for library resources and to find the availability of such documents in the library at a given point of time while 28 (5.7%) disagreed with this statement. In the same vein, the result

showed that 485 (98.4%) agreed that OPAC is a database that allow users to search information by authors, titles, subject and keywords from a computer terminal while 8 (1.6%) disagreed with this statement. Lastly, the result revealed that 486 (98.6%) agreed that OPAC is an electronic database that is faster than the manual catalogue to locate the information resources in the library while 7 (1.4%) disagreed with this statement. In summary, it can be deduced that majority of the respondents had positive perceptions about OPAC.

Research Question 2: What is the frequency of use of OPAC by undergraduate students in University of Ilorin and Kwara State University?

Table 4: Extent of Use of OPAC by Undergraduate Students

Frequency of Consultation	Frequency	Percentages
Daily	147	29.8%
Twice a week	191	38.7%
Monthly	127	25.8%
Yearly	28	5.7%
Total	493	100.0

The result in Table 4.2 showed the extent of use of OPAC by undergraduate students in University of Ilorin and Kwara State University. The result revealed that out of 493 respondents, 147 (29.8%) use OPAC daily while 191 (38.7%) use OPAC twice a week. The result also revealed that 127 (25.8%) use OPAC monthly while 28 (5.7%) use OPAC yearly. In summary, it can be

noted that majority of the respondents use OPAC twice a week.

Research Question 3: What are the perceive usefulness of OPAC among the undergraduate students in University of Ilorin and Kwara State University?

Table 5: Perceive Usefulness of OPAC among the Undergraduate Students

S/N	Statement	SA	A	D	SD
1	Without OPAC, it would be difficult for me to search for information materials needed	228 (46.2%)	190 (38.5%)	75 (15.2%)	-
2	Using OPAC gives me greater control over my searching	237 (48.1%)	228 (46.2%)	21 (4.3%)	7 (1.4%)
3	OPAC enables me to accomplish tasks more quickly	178 (36.1%)	300 (60.9%)	15 (3.0%)	-
4	OPAC support critical aspect of my information retrieval	370 (75.1%)	91 (18.5%)	24 (4.9%)	8 (1.6%)
5	Using OPAC allows me to accomplish more work than would otherwise be possible	308 (62.5%)	87 (17.6%)	77 (15.6%)	21 (4.3%)
6	Using OPAC reduces the time I spend on unproductive activities	311 (63.1%)	175 (35.5%)	7 (1.4%)	-
7	Using OPAC makes it easier to do my search	327 (66.3%)	126 (25.6%)	40 (8.0%)	-

Note: SA+A=Agree while D+SD=Disagree

The result in Table 4.3 showed the perceived usefulness of OPAC among the undergraduate students. The result revealed that out of 493 respondents, 418 (84.7%) agreed that without OPAC, it would be difficult for them to search for information materials needed while 75 (15.2%) disagreed with this statement. The result also showed that 465 (94.3%) agreed that using OPAC gives them greater control over their searching while 28 (5.7%) disagreed with this statement. Furthermore, the result demonstrated that 478 (97.0%) agreed that OPAC enables them to accomplish tasks more quickly while 15 (3.0%) disagreed with this statement. In the same vein, the result

explained that 461 (93.6%) agreed that OPAC support critical aspect of their information retrieval while 32 (6.5%) disagreed with this statement. Similarly, the result confirmed that 395 (80.1%) agreed that using OPAC allows them to accomplish more work that would otherwise be possible while 98 (19.9%) disagreed with this statement. The result also revealed that 486 (98.6%) agreed that using OPAC reduces the time they spend on unproductive activities while 7 (1.4%) disagreed with this statement. Lastly, the result showed that 453 (91.9%) agreed that using OPAC makes it easier to do their searching effectively while 40 (8.0%) disagreed with this statement. In a

nutshell, it can be deduced that majority of the respondents had positive perception about the usefulness of OPAC.

Research Question 4: What are the perceived ease of use of OPAC among the undergraduate students in University of Ilorin and Kwara State University?

Table 6: Perceived Ease of Use of OPAC among Undergraduate Students

S/N	Statement	SA	A	D	SD
1	I often become confused when I am using OPAC	69 (14.0%)	103 (20.9%)	106 (21.5%)	215 (43.6%)
2	I make errors frequently when using OPAC	77 (15.6%)	95 (19.3%)	138 (28.0%)	183 (37.1%)
3	Interacting with OPAC is often frustrating	14 (2.8%)	42 (8.5%)	299 (60.6%)	138 (28.0%)
4	I need to consult the use manual often when using OPAC	31 (6.3%)	69 (14.0%)	178 (36.1%)	215 (43.6%)
5	Interacting with the OPAC requires a lot of my mental effort	28 (5.7%)	35 (7.1%)	256 (51.9%)	174 (35.3%)
6	I find it easy to recover from errors encountered while using OPAC	346 (70.2%)	84 (17.0%)	35 (7.1%)	28 (5.7%)
7	I find it easy to use the OPAC to do what I want it to do	260 (52.7%)	173 (35.1%)	46 (9.3%)	14 (2.8%)

Note: SA+A=Agree while D+SD=Disagree

Based on the perceived ease of use of OPAC among the undergraduate students, the result in Table 4.4 revealed that out of 493 respondents, 172 (34.9%) agreed that they often become confused when they are using OPAC and they make errors frequently when using OPAC while 321 (65.1%) disagreed with this statement. Furthermore, the result showed that 56 (11.3%) agreed that interacting with OPAC is often frustrating while 437 (88.6%) disagreed with this statement. Also, the result confirmed that 100 (20.3%) agreed that they need to consult the use of manual often when using OPAC while 393 (79.7%) disagreed with this statement. In the same vein, the result showed that 63 (12.8%) agreed that interacting with the OPAC requires a lot of their mental effort while 430 (87.2%)

disagreed with this statement. Similarly, the result revealed that 430 (87.2%) agreed that they find it easy to recover from errors encountered when they are using OPAC while 63 (12.8%) disagreed with this statement. Lastly, the result confirmed that 433 (87.8%) agreed that they find it easy to get the OPAC to do what they want it to do while 60 (12.1%) disagreed with this statement. In summary, it can be deduced that majority of the respondents had positive perception about the ease of use of OPAC.

Research Question 5: What are the challenges that undergraduate students in University of Ilorin and Kwara State University encountered while using OPAC?

Table 7: Challenges that Undergraduate Students Encountered while Using OPAC

S/N	Statement	Yes	No
1	Poor orientation to the use of OPAC	154 (31.2%)	339 (68.8%)
2	Lack of assistance from library staff	365 (74.0%)	128 (26.0%)
3	Lack of knowledge to use OPAC	127 (25.8%)	366 (74.2%)
4	Unstable power supply	427 (86.6%)	66 (13.4%)
5	Poor internet facility	472 (95.7%)	21 (4.3%)
6	Inadequate computer terminals for OPAC use	365 (74.0%)	128 (26.0%)

The results in Table 4.5 identified challenges that undergraduate students encountered while using OPAC. The result revealed that out of 493 respondents, 154 (31.2%) stated that poor orientation is one of the challenges that they encountered when they are using OPAC while 339 (68.8%) against this statement. Also, the result showed that 365 (74.0%) claimed that lack of assistance from library staff is another challenge they encountered while 128 (26.0%) against this statement. In the same vein, the result confirmed that 127 (25.8%) affirmed that lack of knowledge to use OPAC is another challenge they encountered while 366 (74.2%) disagreed with this statement. Similarly, the result showed that 427 (86.6%) ascertained that unstable power supply is another challenge they encountered when they are using OPAC while 66 (13.4%) against this statement. Furthermore,

the result showed that 472 (95.7%) stated that poor Internet facility is another challenge they encountered when they are using OPAC while 21 (95.7%) against this statement. Lastly the result revealed that 365 (74.0%) claimed that technophobia is another challenge to their use of OPAC while 128 (26.0%) against this statement. In a nutshell, it can be noted that lack of assistance from library staff; unstable power supply; poor internet facility and inadequate computer terminals designated for the use of OPAC.

Testing of Hypotheses

H₀₁ There is no significant difference in the perception of male and female undergraduate students in University of Ilorin and Kwara State University about Online Public Access Catalogue.

Table 8: Difference in the Perception of Male and Female Undergraduate Students on the Use of OPAC

Variable	N	M	SD	T-cal	Df	P
Male	374	12.81	2.92	62.838	491	.000**
Female	119	5.95	0.25			

Source: Survey (2019)

The results in Table 4.6 revealed the differences in the perception of male and female students in University of Ilorin and Kwara State University about OPAC. However, the results confirmed that there is a significant difference in the perception of male and female undergraduate students. This is because the t-value which is 62.838 and the associated p-value which is 0.000 is less than the level of significant 0.05. Furthermore, the mean score of male students which is 12.81 is significantly higher than the mean score of female students which is 5.95. Therefore, the null

hypothesis is rejected. In the light of this, the study in turn establishes that there is a significant difference in the perception of male and female undergraduate students in University of Ilorin and Kwara State University about OPAC.

H₀₂ There is no significant relationship between the perceived usefulness of OPAC and use of OPAC among the undergraduate students in University of Ilorin and Kwara State University.

Table 9: Relationship between Perceived Usefulness and Use of OPAC among Undergraduate Students

Variable	Mean	SD	N	Df	R-cal	P-value	Remark
Perceived Usefulness	15.7413	2.337	493	491	.128	.000**	Sig...
Use of OPAC	13.8476	2.259					

** Correlation is significant at .001 level (2-tailed)

The results in Table 4.7 confirmed the relationship between perceived usefulness and use of OPAC. The result revealed that there is a significant relationship between perceived usefulness and use of OPAC among the undergraduate students in University of Ilorin and Kwara State University. This is shown in the table where $r\text{-cal} = .128$; $df = 491$ and $P = 0.000$ which is less than the level of significant 0.05. This means that there is a relationship between

perceived usefulness and use of OPAC among the undergraduate students in University of Ilorin and Kwara State University.

H₀₃ There is no significant relationship between the perceived ease of use of OPAC and use of OPAC among the undergraduate students in University of Ilorin and Kwara State University.

Table 10: Relationship between Perceived Ease of Use and Use of OPAC among Undergraduate Students

Variable	Mean	SD	N	Df	R-cal	P-value	Remark
Perceived ease of use	16.7452	1.936	493	491	.390	.000**	Sig...
Use of OPAC	14.9711	1.259					

** Correlation is significant at .001 level (2-tailed)

The results in Table 4.8 showed the relationship between perceived ease of use and use of OPAC. The result demonstrated that there is a significant relationship between perceived ease of use and use of OPAC among the undergraduate students in University of Ilorin and Kwara State University. This is because the result revealed in the table showed that $r\text{-cal} = .390$; $df = 491$ and $P = 0.000$ which is less than the level of significant (0.05). This therefore illustrate that there is a relationship between perceived ease of use and use of OPAC among the undergraduate students in University of Ilorin and Kwara State University.

Discussion of Findings

The study found that majority of the respondents had positive perception about the OPAC. This is because they agreed that OPAC is an electronic database that is faster than the manual catalogue to locate the information resources in the library; and a database that allow users to search information by authors, titles, subject and

keywords from a computer terminal. This finding corroborates the studies of Okafor and Ukwoma (2010); Fabunmi and Asubiojo (2013) who posited that OPAC is a computerize version of manual catalogue which allow user's access to information resources via internet using author, title, subject, etc as access points; and a database that is designed to be accessible via terminals, so that library users may directly and effectively search and retrieve bibliographic records without the assistance of a human intermediary. Furthermore, the study examined the frequency of use of OPAC among the undergraduate students. The study found that majority of the respondents use OPAC twice a week. The reason for this may be subjected to the fact that they do not use library daily. Therefore, they make use of OPAC during those periods of information needs. This finding contradicts the work of Veena, Mallaiah and Pushpalatha (2015); and Gohain and Saikia (2013) who reported in their study that undergraduate students use OPAC daily.

In the same vein, the study examined the perceived usefulness of OPAC among the undergraduate students in University of Ilorin and Kwara State University. It was discovered that majority of the respondents had positive perception about the usefulness of OPAC. This is because it reduces time spent on information search and enables the accomplishment of tasks more quickly. This finding supported the work of Gohain and Saikia (2013) who examined the usefulness of OPAC services and posited that it enables quick search and relevant results. On the perceived ease of use, the study found that majority of the respondents supported ease of use as one of the features of OPAC. This finding is in agreement with the study of Adenike and Akin (2014) that discovered ease of use of OPAC by undergraduate students. This study identified some of the challenges in the use of OPAC as: lack of assistance from library staff; unstable power supply; poor internet facility and inadequate computer terminals designated for the use of OPAC. This is in line with the work of Larson (2018) who assessed the use of Online Public Catalogue (OPAC) and discovered that lack of information searching skills, lack of awareness; lack of support from the library staff; irregular power supply, network failure and inadequacy of computer terminals are the challenges bedeviling the adequate use of OPAC.

The results of the hypothesis showed that the mean score of male respondents is significantly higher than the mean score of female students. This means that the p-value which is 0.0000 is lesser than the level of significant (0.05). Therefore, the finding established that there is a significant difference in the perception of male and female students. Also, the result of the second null hypothesis which stated that there is no significant relationship between perceived usefulness and use of OPAC was rejected. This is because the study found that the r-cal is 0.128; and the p-value which is 0.000 is significantly lesser than the level of significant. In the light of this the study in

turn established that there is significant relationship between perceived usefulness and use of OPAC among the undergraduate students in University of Ilorin and Kwara State University. This may be attributed to the fact that the students derived more benefit when they are using OPAC than to use manual catalogue.

Lastly, the third null hypothesis which stated that there is no significant relationship between perceived ease of use and use of OPAC among the undergraduate students in University of Ilorin and Kwara State University was rejected. Because the study found that the r-cal is 0.390 and the associated p-value is 0.000 which is lesser than the level of significant. The study therefore, stated that there is a significant relationship between perceived ease of use and use of OPAC among the undergraduate students in University of Ilorin and Kwara State University. The reason for this may be students easily make use of OPAC to locate the information materials they want in the library.

Conclusions

Based on the findings of the study, it could be concluded that undergraduate students in University of Ilorin and Kwara State University had positive perceptions about OPAC while they also use OPAC twice a week. Also, it could be concluded that undergraduate students in University of Ilorin and Kwara State University had positive perception about the usefulness and ease of use of OPAC while lack of assistance from library staff; unstable power supply; poor internet facility and inadequate computer terminals designated for the use of OPAC are the major challenges that undergraduate students in University of Ilorin and Kwara State University encountered while using OPAC. Furthermore, the study concludes that there is a significant difference in the perception of male and female undergraduate students in University of Ilorin and Kwara State University about the OPAC. In the same

vein, it could be concluded that there is a significant relationship between perceived usefulness and use of OPAC. Lastly, the study concludes that there is a significant relationship between perceived ease of use and use of OPAC.

Recommendations

Based on the findings of the study, the following recommendations were presented by researcher:

1. Students should be given proper orientation as they resume for academic activities in the university on the use of library and OPAC.
2. Library staff should render necessary assistance to the students that are facing difficulty in using OPAC.
3. Library management should provide adequate computer system for easy access to Digital library services.
4. University and library management should provide good internet facility and stand-by generator that will facilitate the ease of use of OPAC.

References

- Ansari A. M. & Amita. (2008). Awareness and Use of OPACs in five Delhi libraries. *The Electronic Library* 26(1). A
- Ansari, M. A. (2008). Awareness and use of OPACs in five Delhi libraries. *The Electronic Library*. 26 (1)
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.
- Devendra and Nikam. K. (2013). Attitudes of law university library users towards the use of OPAC/Web OPAC in Andhra Pradesh: A study. *SRELS Journal of Information Management*. 50(3): 327- 35.
- Fabunmi, O.M and Asubiojo, B. O. (2013). Awareness and use of Online Public Access Catalogue (OPAC) by students of Obafemi Awolowo University, Ife Ife, Nigeria. *Library Philosophy and Practice*, 1-18 Paper 922, Available at: <http://digitalcommons.Unl.edu/libphilprac/922>.
- Gbemi-Ogunleye, P. (2016). Library use and students academic achievement: Implication for counseling. *Information and Knowledge Management*. 6(2), 50-52
- Gohain, A. and Saikia. M (2013). Use and users satisfaction on Online Public Access Catalogue (OPAC) services among B.Tech. students of school of engineering in Tezpur University: A Survey... *Library Philosophy and Practice* (e-journal) paper 990.
- Islam, M. (2011). Effect of demographic factor on e-learning effectiveness in a higher learning institutions in Malaysia. *International Education Studies*, 4(1), 4-7.
- Jimoh, R. G. and Oyinlola, G. A. (2013). The relationship between perceived usefulness (PU), perceived ease of use (PEOU) and behavioural intention (BI) to use fingerprint biometric authentication at the university of Ilorin student's hotels. *International Journal of Information Processing and Communication (IJIPC)*, 1(1), 138-151.
- Kumar, S. (2014). Relationship of OPAC users' satisfaction with their demographic characteristics, computer skills, user education, user assistance and user-friendly OPAC. *The electronic library*.
- Lakshmi, R. S., Chinnsamy, K., Balasubramanian, P., and Muthuray, R. (2013). A study on the use of Online Public Access Catalogue (OPAC) by students and faculty members of Unnamalainstitute of Technology in Kovilpatti (Tamil Nadu). *International Journal of Library and Information Studies*, 3(1), 17-26.
- Malhotra, Y., and Galletta., D. F., (1999). Extending the Technology Acceptance Model to Account for Social Influence: Theoretical Bases and Empirical Validation. Proceedings of the 32nd Hawaii International Conference on System Sciences Proceedings of the 32nd Hawaii International Conference on System Sciences (1-14). Hawaii, US: IEEE
- Larson, A. G. (2018). A Survey on the Use of Online Public Access Catalogue among Undergraduate Students at Osagyefo Library, University of Education, Winneba, Ghana. *International Journal of Pedagogy, Policy and ICT in Education*, 6(1), 43-56.

- Mugenda, O. M., and Mugenda, A.G. (2008). *Research Methods: Quantitative and Qualitative approaches*, Nairobi: African center of technology studies.
- Mulla, K. R. and Chandrashekara, M. (2009). A study on the effective use of online public access catalogue at the libraries of engineering colleges in Karnataka (India). *International Journal of Library and Information Science*, 1(3), 29-42.
- Narang, A., and Singh, S. (2013). Use of Online Pubic Access Catalogue by the research scholars of Guru Nanak Dev University, Amritsar: A Study. *SRELS Journal of Information Management*, 50(2), 191-200.
- Nwalo, K. I. N. (2003). *Fundamental of library practice: A manual on library routines*. Ibadan: Stirling Horden: 1-7.
- Sankari, L.R., Chinnasanry, K., Balasuramanian, P. and Muthuruj, R. (2013). A study on the use of online public access catalogue (OPAC) by students and faculty managers of Unnamalai Institute of Technology in Kovilpatti (Tamil Nadu). *International Journal of Library and Information Studies*, 3(1), 17-27
- Shivakumaraswmay, K. N. and Narendra, B. K. (2016). Use and users satisfaction on Online Public Access Catalogue (OPAC) services in B. G. S. Institute of Technology: A survey. *International Journal of Library and Information Science*, 6(2).
- Veena, G., Mallaiah, T. Y., and Pushpalatha, K. (2015). Use and awareness of Online Public Access Catalogue (OPAC) facility by users of SVS college library, Bantwala, Mangalore: A study. *International Journal of Library and Information Studies*, 5(4), 65-71.