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EFFECTS OF DEMOGRAPHIC FACTORS AND ICT SKILLS ON THE UTILIZATION OF E-RESOURCES BY UNIVERSITY UNDERGRADUATE STUDENTS IN KWARA STATE, NIGERIA

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Abstract *This study examined the factors affecting the utilization of e-resources by undergraduate students in selected universities in Kwara State, Nigeria. It raised five (5) research questions and formulated two (2) hypotheses, adopting descriptive survey design, where questionnaire was used to collect data. The population for this study was university undergraduates in Kwara State with population of 53,130. However, the study sample comprises: University of Ilorin, 292(76.4%), Kwara State University, Malete 69(18.1%) and Al-Hikmah University, 21(5.5%). Simple random sampling technique was adopted to allow for equal chance of arriving at the selected respondents. The research questions were analyzed with descriptive statistics of frequency counts and simple percentage while the hypotheses were tested with PPMC, and t-test. Out of the 382 copies of the questionnaire administered on the respondents in the three universities, only 369 copies were retrieved from which only 358 copies were found to be duly completed and usable for the analysis. The findings of the study revealed that out of all the e-resources available in these university libraries, the most common one was the Internet resources, followed by online databases. Younger students were found to be ardent users of e-resources compared to older students and also exhibited some form of mastery and technical know-how well above those of older students. On ICT skills as predictors of e-resources utilization, competence and dexterity in ICT were essential requirements for the use of computers. Therefore, the study recommended that the undergraduate students should be sensitized on available e-resources in the library, be trained more on their ICT skills in order to propel them to make better utilization of e-resources towards their academic and other information needs. In contrast, the library management should carry out advocacy campaigns that will focus on older students in order to ensure that they consult e-resources like the younger ones do.*

Keywords: *Demographic Factors, ICT Skills, Utilization, Electronic Resources, Undergraduate Students*

INTRODUCTION

n recent times, the integration of electronic services into library and information services is on geometric increase, consequently leading to an increase in research on utilization of e-resources in library and information centres. It is believed that e-resources' utilization is an indicator of their importance in both research and learning, with certain factors affecting their utilization by library users, some of which, according to Rukwaro (2015) include adequacy of Information and Communication Technology (ICT) infrastructure, Internet penetration, bandwidth, and high level of information literacy of users. It was noted that demographic factors of individuals can determine their attitude towards a given phenomenon (Sajilan, Hadi, & Tehseen, 2015). In a similar submission, Sulaiman (2020) opined that this century is regarded as information revolution, where information is available to consult, design, use and make informed decisions, especially now that e-learning, against the backdrop of COVID-19 pandemic, became a top

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priority in Nigeria's higher education landscape (Bataineh, Atoum, Alsmadi & Shikhali, 2021).

Libraries were therefore able to take advantage of these developments to facilitate information service delivery and library operations through their e-libraries. The primary functions of a university include teaching, learning and research, while the university library is saddled with the responsibility of supporting that university in achieving its functions. Quadri (2013) opined that the university library supports teaching activities of the university by supporting education necessary for the development of personality, and noted that university library supports in research by helping faculty and students to increase the body of theoretical knowledge as well as its application to practical problems. Chukwuji and Umeji (2020) affirmed that university library is responsible for providing teachers, students, and the university community with essential information needed to satisfy their needs. It is against this foregoing that university e-libraries provide e-resources for the utilization of its users. Utilization of electronic information resources (EIRs) has been an issue of concern from the time libraries changed from traditional monuments to knowledge acquisition and information centers (Abubakar & Mamman, 2020).

E-resources can be referred to as EIRs or digital resources / materials, which Johnson, Evensen, Gelfand, Lammers, Sipe, and Zilper (2012) described as the e-version of information, viewed by means of e-system and computer network. Akpojotor (2017) observed that e-resources deliver the collection of information as full-text (aggregated) databases, e-journals, image collections, multimedia in the form of Compact Disc (CD), tape, Internet, and web technology. Examples of e-resources include e-journals, e-mail, e-news, data archives, e-discussions, and online chatting. Madondo, Sithole, and Chisita (2017) described e-resources as those library materials that require computer access, whether through a personal computer, mainframe, or smart technologies, with some available in university libraries. However, Oyeniyi, Oyeniran, Adebayo and Oyeniran (2020) underscored the fact that the use of ICT has become increasingly important in academics and libraries are switching over to ICT-based resources and services at an accelerated pace.

Similarly, Mukhtar and Maidabino (2021) refer to EIRs as sources of information encoded and made available for direct or remote access using the computer and other e-devices usually connected to the Internet and CD-ROMs, viewable online. Advances in ICTs and the exponential increase of information, primarily in digitalized formats, have resulted in a massive revolution in how libraries of all types are maintained, and the ways that services are delivered to users. These have resulted in apparent changes in the ways information items are gathered, processed, stored, conserved, and communicated to the users (Onwubiko, 2022). According to Bajpai and Margam (2019), in order to fulfill their duties successfully and efficiently in a digital context, library personnel need to possess a good grasp of new digital capabilities to enable information workers have extensive Internet and IT skills allowing them to access excellent online resources, troubleshoot, and provide reference services through e-mail and other social networking technologies (Uzohue & Yaya, 2016).

Some of the competencies required for effective and efficient online collaboration, email management competency, online research abilities, desktop publishing, word processing skills, social media management, data management, and retrieval skills were highlighted as competencies required for librarians (Bajpai & Margam, 2019; Doyle, 2019). Similarly, Oyedokun, Oyewumi, Akanbi and Laaro (2018) viewed ICT competencies of library staff to be those relevant skills and knowledge to be acquired by those working in the library to be able to fully exploit information search, retrieval, and delivery, using electronic format. It is the acquisition of knowledge, skills and abilities at a level of expertise sufficient to be able to perform appropriately and professionally a given task in a work place.

Emwanta and Nwalo (2013) described ICT skills as the ability to use ICT facilities to perform various tasks. They noted further that ICT is fundamental to the learning process in the present age. Quadri (2013) stressed that university libraries have been deploying ICT to satisfy diverse information needs of the users; just as students, irrespective of their age, gender, and level of study, have in turn, been exploring the advantages offered by the availability and use of e-resources to support teaching and research. The adoption of ICT by university libraries has facilitated information dissemination to various users. The rapid growth of ICT is changing the way university libraries operate today. In this Internet-dominated age and information rich culture, ICT skills are of great value in accessing and retrieving of information (Emwanta & Nwalo, 2013).

Demographic characteristics, generally concerned with the individual characteristics could also be determinants of utilization of e-resources, some of which include gender, age, and social status. To undergraduate students in any university community, these may include age, gender, course of study, and level of study. Quadri (2013) noted that demographics often yield important clues as to what contribute to undergraduates' use of e-resources. According to Emiri (2012), the utilization of e-resources can be influenced by age, level of education, sex, occupation, economic status, marital status, religion, race, residence, opinion and community leadership. Islam (2011) found that the level of education, program of study, age and gender were found to be significant in the utilization of e-resources.

Some gender differences have been found in attitudes toward technology, intensity of Internet use, online applications

preferred, and experience in cyberspace (Obuh, 2009). This means that there might be likely difference in gender attitude towards the utilization of e-resources. Gender, which differentiates a male from a female, is sometimes seen as a possible factor influencing the use of e-resources (Steinrova & Susol, 2007). Oyeniyi (2013) stated that human behaviours show tendencies of men and women to manifest differences in their characteristics, when using e-resources. Also, Emiri (2015) noted that behavioural perspectives of male and females are better understood in the concept of gender in psychosocial literature, were the physical, mental and social differences in the utilization of e-resources.

Age is another demographic characteristic of library users that can affect the utilization of e-resources in university libraries. It is generally known that there is need to be skilled in the use of computers to be able to access the available e-resources. Okiki and Asiru (2011) found that there were significant age differences on the computer task, younger adults make quick decisions with the aid of computers compared to the older adults that make few correct decisions taking longer time than the younger adults. Islam (2011) concluded that the level of education, program of study, age and gender were found to be significant in the effectiveness of e-learning. However, race and marital status were found to have no significant effect on the utilization of e-resources. Though many previous studies have focused e-resources' utilization of discreet groups of identified respondents, little was done in the area of focusing homogeneous group of students across a number of universities, which was the gap that this study sets out to fill. Therefore, it is against this background that this study seeks to examine demographic factors and ICT skills as factors affecting the utilization of e-resources by undergraduate students in selected universities in Kwara State.

STATEMENT OF THE PROBLEM

Omotunde and Babalola (2014) observed that most academic libraries in Nigeria have invested huge resources in the creation and maintenance of institutional e-resources in order to take advantage of the possibilities offered by ICT. They noted, however, that for the huge investment made on e-resources to materialize and serve its purpose, the library must take note of some critical personal factors, which may include demographic factors and ICT skills of the potential users. Having knowledge of these factors can help improve the utilization of e-resources in libraries. Sivathaasan, Achchuthan, and Kajananthan (2013) observed that personal demographic variables have influence on the utilization of e-resources, which was supported with the findings of studies by Abu Qudais, Al-Adaile, and Al-Omari (2010); as well as those of Mufutau, Ogundele, and Oluwadamilare (2012), both of which indicate that age, gender, level of study have influence on the usage of the e-resources.

Amkpa (2007) found that though there has been heavy students' IT use, especially, computer and phone, there has been underutilization of e-resources in libraries, and identified the causes of this to include the gender, age, and level of study of undergraduate students. Ukachi (2013) noted that e-resources are grossly underutilized by students in Nigerian universities despite their potentials for effective learning and research. For effective usage of e-resources, the students are expected to possess some basic skills to facilitate the utilization. These skills are very vital to enhance the utilization of e-resources. However, the need to establish the existence of these essential requirements among undergraduate students in Kwara State remained a source of research concern. It is against this backdrop that this study sought to examine the demographic factors and ICT skills as factors affecting the utilization of e-resources by undergraduate students in selected universities in Kwara State.

OBJECTIVES OF THE STUDY

The broad objective of this study was to examine demographic factors and ICT skills as factors affecting the utilization of e-resources by undergraduate students in selected universities in Kwara State. The specific objectives were to:

- Identify the various e-resources available in the selected universities in Kwara State;
- Investigate the influence of undergraduate students' age on utilization of e-resources;
- Examine the influence of students' gender on utilization of e-resources in these libraries;
- Determine the perceived influence of the undergraduate students' level of study on the utilization of e-resources in these libraries; and
- Assess the influence of undergraduate students' ICT skills on the utilization of e-resources.

Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

H_{01}: There is no significant difference between male and female undergraduate students' utilization of e-resources.

H_{02}: There is no significant relationship between undergraduate students' ICT skills and the utilisation of e-resources.

REVIEW OF RELATED LITERATURE

University library can be categorized as an academic library. Yusuf and Iwu (2010) described academic libraries as the

nerve centre or the hub around which scholarship revolves; an indispensable instrument for intellectual development, being a store house of information to which users (students as well as lecturers) usually turn for information. These information resources vary in both print form and non-print form. According to Mwatela (2013), e-resources provide access to many different types of information sources including web pages, personal papers, e-journal articles, local materials, conference papers and reports. Okiki and Asiru (2011) identified e-resources in a university library include CD-ROM databases, electronic mails, OPAC, and Internet browsing and noted that the Internet is the most prominent of these sources as it provides unfettered access to e-books and e-journals, various databases, and search engines.

E-resources are important for teaching, learning, and research in a university library. Emwanta and Nwalo (2013) opined that all these are the purpose of having e-resources and that its availability has to be consistent with, and supportive, of the institution's mission and goals. They stressed further that library resources and services should be sufficient in quality, depth, diversity, and currency to support the institution's curriculum. According to Owolabi, Idowu, Okocha, and Ogundare (2016), e-resources have gradually become a major resource in every university library in recent years and found that the e-resources available include CD-ROMs, databases, Internet services, e-mail services, e-journals, OPAC, online databases, e-databases, and e-books, identifying e-journals as the most available e-resource that is in the library studied.

Oyeniyi (2013) identified e-resources in university libraries to include CD-ROM databases, Internet, e-catalogue, e-books, e-journals, AJOL, OARE, Wikipedia, EBSCOhost, JSTOR, Wilson Web Omnifile, DOAJ, and ERIC. Quadri (2013) noted that CD-ROM, audio-visual materials, microfilms, microfiches, databases, and online resources are examples of e-resources available in university libraries. Quadri, Adetimirin, and Idowu (2014) assessed the availability of e-resources at Babcock University, Illishan-Remo and Redeemers University, Ogun State and found available e-resources to include e-journals, e-books, CD-ROM, online databases (AGORA, HINARI, JSTOR, ERIC, OARE), OPAC, and Internet, with the Internet as the most available in both universities, while e-journals and CD-ROM were the least available in Redeemers and Babcock Universities, respectively. Above all, it was found that Babcock University has adequate e-resources than Redeemers University.

Thanuskodi (2012) noted that e-resources deliver the collections of information as full-text databases, e-journals, image collections, multimedia in the form of CD, tape, Internet, and Web technology and identified available e-information sources to include e-periodicals, CD-ROMs, mailing list to databases, which all have a common feature of being used and sometimes modified by a computer. Toyo (2017) identified e-resources to include e-journals, online databases (AGORA, JSTOR, EBSCOhost, AJOL, HINARI), e-books, locally loaded databases, website, CD-ROM, e-text, e-abstracting and indexing databases such as MEDLINE, e-news, e-images, and e-music. Amos (2021) examined utilization of library-based e-information resources and services by postgraduate students in private universities in south-western Nigeria and found that postgraduates in the selected private universities fairly utilized available library e-resources. Bankole, Ajiboye and Otunla (2015) concluded that the use of electronic resources has availed researchers and students' access to global information resources particularly the Internet for their scholarly intercourse.

Influence of Undergraduate Students' Age on Utilisation of E-Resources

Diyaolu, Okunlaya and Ibrahim (2015) noted that younger users rely on e-resources more heavily and rate themselves as experts in using them than the older users do and stressed further that age was found to correlate with computers and use of e-resources by library users. Okiki and Asiru (2011) found that younger generations of this age, are brought up with computers. Olatoye, Nekhwevha and Muchaonyerwa (2019) stated that younger generations develop interest in computer usage to search for information. Generally, it can be observed that the average age of exposure to computer and other digital device usage has continued to improve, which attested to their finding that there were significant age differences on the computer task, younger adults make quick decisions with the aid of computers compared to the older adults that make few correct decisions and taking longer time than younger ones. Similarly, Shaqour and Daher (2013) also found that younger users are more enthusiastic adopters of e-resources than older users. Ruzegea and Msonde (2021) opined that the younger people were quick to comprehend things and engage in information and computer tasks compared to the adults.

Fabunmi and Asubiojo (2013) examined the awareness and use of OPAC by students of Obafemi Awolowo University, Ile-Ife, Nigeria and found that the age distribution of the users of OPAC showed a similar trend in favour of the younger ones having more advantage than their older counterparts and that 400 and 500 levels, as well as postgraduate students were less aware of the library OPAC. Bakkabulindi, Sekabembe, Shopi and Kiyingi (2012) investigated the effect of qualification in ICT, age and income on use of computers among postgraduate students in Makerere University School of Education and affirmed that there was a significant negative relationship between age and the utilisation of computers.

Emiri (2015) assessed the influence of demographic factors and use of OPAC by undergraduate students of University

of Benin, Benin, and Ambrose Ali University, Ekpoma, Edo State, Nigeria and found that age has significant influence on the use of OPAC and that students of younger age have more consistency and expertise on its use. Deng (2010) examined the emerging patterns and trends in utilizing e-resources in a higher education environment among academic staff and students in an Australian university and identified a similar pattern in the age distribution of the users; a finding that indicated that the use of e-resources decreased with age.

Sivathaasan, Achchuthan and Kajananthan (2013) examined demographic variables of university teachers and usage of e-resources at the University of Jaffna, Sri Lanka and revealed that there is a significant mean difference between age group on the use of e-resources, with that of the younger age group in the highest mean category while that of the older group was the lowest mean bracket. However, Oyedapo, Shabi and Awominure (2019) found out that undergraduates' level of e-library resources utilization was low despite the huge amount of money involved in subscribing to databases and the maintenance of the e-library hardware. Adepoju (2016) investigated demographic factors affecting ICT utilization by undergraduate students in some selected universities in Nigeria, in which 1000 undergraduate students were selected from University of Ibadan, University of Lagos, Ekiti State University, and Lagos State University. The study found that there was a significant difference in the utilization of ICT between students of different age groups. Similarly, Quadri (2013) found that there was a significant relationship between age and use of online library resources, just as Daniel and Agba (2021) found that academic level of the students studied influenced utilization of information resources, whereas their gender and age did not.

Influence of Students' Gender on Utilization of Library E-Resources

Gender is simply the sexual category of the student users of the e-resources available in the library. The issue of gender gap in technology usage is gaining ground and attracting the attention of academic researchers (Olatoye, Nekhwevha & Muchaonyerwa, 2019). Susol and Steinerova (2007) noted that research on gender differences still remains open, while Tella and Mutula (2008) noted that one of the recurring themes in under-utilization of ICTs is the lack of relevant competences with females often cited as more affected than males. Gender difference in web use is found in the online applications whereby male college students were more likely to be found than their female counterparts (This implies that gender differences determined the utilization of library e-resources). In a study by Alshankity and Alshawi (2008) on gender differences in Internet usage among faculty members in Saudi Arabia, it was found that there is no significant gender difference in the overall Internet usage among the respondents.

A study by Lee and Huang (2014) on gender differences in computer literacy reported that students with higher computer literacy were more inclined to access and make use of library facilities. They further stated that differences exist between female and male undergraduate students at the University of Botswana with regard to computer literacy. In the same vein, it is found that women tend to experience more difficulty in finding information online than men, and Venkatesh et al. (2012) revealed a high preference for the internet as the first source of information among men. Men also put more stress on non-paid electronic resources as opposed to women's more frequent use of licensed resources.

Oyeniyi (2013) examined gender differences in information retrieval skills and use of e-resources among information professionals in South-west, Nigeria in which the findings revealed that gender differences do not exist between male and female information professionals on the basis of acquisition of information retrieval skills. Similarly, there was no statistically significant difference in their use of e-resources, even though it showed that male professionals had a slightly higher mean score on their use of e-resources. Ikolo (2010) conducted a study on gender differences based on use of e-resources and found that the gender digital divide is manifested in the low number of female users of ICTs compared to men. This shows that female users were not accustom to the use of ICT like their male counterparts, implying that there may be a significant difference in the gender of users of library e-resources. On the contrary, Ikolo and Okiy (2012) in a study on gender differences in computer literacy among medical students in selected Southern Nigerian universities found that females use Internet more than males. Also, Bassi and Camble (2011) reported that there exists a statistical difference between males and females in using e-resources as females have more difficulty in finding information online than males.

Alao and Folunsho (2008) also reported the existence of gender difference in Internet, as males used the Internet than females, which was in consistent with the findings of Nwezeh (2010), which investigated the impact of Internet on teaching, learning and research and found that Internet is mostly used by men, while female users are increasing more slowly. Deng (2010) carried out an empirical analysis of emerging patterns and trends in use of e-resources in Australian higher education environment, which found that females used e-resources more than males and that there was no significant difference in the use of e-resources by gender. Quadri's (2013) study found that there was no significant relationship between gender and use of online library resources and concluded that there is weak correlation between the gender of the undergraduates in Babcock and Redeemer and the use of online library resources in the university libraries. Burger, Creamer and Meszaros (2011) admitted that females were more limited in their search skills for online information, unlike men who were more competent and comfortable with

the utilization of e-information resources thereby making more use of varied set of internet applications. From the foregoing, more males felt competent and comfortable in computer skills than females.

Influence of Undergraduate Students' Level of Study on Utilization of E-Resources

Owolabi, Idowu, Okocha and Ogundare (2016) examined utilization of electronic information resources by undergraduate students of University of Ibadan using students of Faculties of Social Sciences and Education. The study's findings revealed that undergraduate students in 300 and 400 levels of study utilize e-information resources more than those at the lower levels. Kurga (2014) examined the influence of teachers' age, gender, and level of training on attitudes towards the use of integrated e-learning approach to the teaching and learning of Business Studies in three Kenyan secondary schools in three counties of Kenya viz: Nakuru, Vihiga and Siaya. Its findings implied that the level of training, which is synonymous to level of study, does not have significant influence on teachers' attitude towards the use of integrated e-learning approach. A study by Okhakhu, Oladiran and Adetunji (2017) analyzed demographic influence, usage, and availability of e-resources among students of Baptist Theological Seminary, Ogbomoso, Nigeria and found that the students at the undergraduate level of study were the most active users of the e-resources available in the library, followed by the postgraduate students and then diploma students.

Omotunde and Babalola (2014) examined the influence of information technology competence and demographic characteristics on undergraduate students' perception of e-portal at Babcock University, Covenant University, and Bowen University, with the findings revealing that students' level of study significantly influenced their assessment of their e-portals. Quadri, Adetimirin and Idowu (2014) assessed the availability and utilization of library e-resources by undergraduate students of Babcock University and Redeemer University. The study found that most users of e-resources in Babcock University are those students in 400 level while those in 200 level are the highest users of e-resources in Redeemer University.

Undergraduate Students' ICT Skills as a Predictor of Utilizing E-Resources

The improvement in the use of ICT over a decade ago has heralded the development and implementation of various digital or e-libraries. Skills are the knowledge and technical know-how required of an individual to accomplish a task or effectively use library e-resources, since most of them are accessible mainly with the aid of various ICT gadgets. Therefore, there is essential need for their users to possess adequate ICT skills to enable them utilize e-resources, maximally. In this study, ICT skills refer to the individual's ability to capture, process, store, and disseminate needed information electronically. Bakkabulindi, Sekabembe, Shopi and Kiyingi (2012) examined the qualification in the effect of postgraduate students' ICT skills as predictor for the use of computers in Makerere University School of Education and found a significant relationship between possession of ICT skills and the use of computers.

Alison, Kiyingi, and Baziraake (2012) examined the factors affecting the utilization of e-health information resources in three universities offering medical courses in Uganda, namely Makerere University, Mbarara University of Science and Technology, and Uganda Martyrs University Nkozi and found a significant relationship between usage of e-resources and ICT skills, thus inferring that the use of e-resources depends on individuals' skills to information search skills.

IbukunOluwa, Fhulu and Ndakasharwa (2021) investigated the levels of ICT literacy, proficiency and experiences among Universities of Fort Hare and Rhodes undergraduate students, on the utilization of e-resources among South Africa. Its findings revealed an underutilization of e-resources due to low level of ICT proficiency and experience. Gilbert (2015) found that the level of ICT skills among postgraduate students in Modibbo Adama University of Technology affected e-resources' utilization and that there was a high level of ICT skills among the postgraduate students, and high utilization in the University Library. This indicates that their level of ICT skills significantly affected the utilization of e-resources, implying that the ICT skill of the students was positively related to their utilization of e-resources in the University Library. Abubakar, Issa and Ambali (2021) indicated that poor power outage, ineffective communication channels slow network and inadequate searching skills responsible for utilization of ICT skills.

Emwanta and Nwalo (2013) examined the influence of computer literacy and subject background on the use of e-resources by undergraduate students at the Federal University of Technology, Akure and Obafemi Awolowo University, Ile-Ife and found that computer literacy of undergraduate students influenced their use of e-resources by the students. A study by Sadiku and Kpakiko (2017) examined computer self-efficacy and use of electronic resources by students in Obafemi Awolowo University, Ile-Ife; Ambrose Ali University University, Ekpoma; Enugu State University, Enugu; Bayero University, Kano; Gombe State University, Gombe; and University of Abuja, Abuja. The study revealed that there was high computer self-efficacy among the students, which positively influenced the use of e-resources among them. Ankrah and Acheampong (2017) examined students' use of e-resources in University of Professional

Studies, Accra, Ghana and assessed the relationship between ICT literacy skills and use of e-resources by the students, with the findings revealing that ICT literacy skills and extent of use of e-resources were directly related. Godwin, Jamogha and Jamogha (2020) investigated the influence of ICT skills on library information resources' utilization by undergraduates in two universities in South-west, Nigeria and found that ICT skills possessed by the undergraduates were high.

METHODOLOGY

This study adopts a descriptive survey, which was used to gather opinions from the respondents. The study population was 53,130, comprising all undergraduate students at the University of Ilorin, Kwara State University and Al-Hikmah University each representing Federal, State and Private. The simple random sampling technique was adopted to give every respondent equal chance of being selected in the process while the sample size of 382 was determined using sample size calculator by Raosoft at confidence level of 95% and margin of error of 5%. The questionnaire was the only instrument for data collection with its contents guided by the objectives of the study. Face validity of the instrument was done by integrating the input of experts in the final questionnaire, whereas the instrument's reliability was determined through pilot test, conducted on some students of Ladoke Akintola University of Technology, Ogbomoso to arrive at r=.78 reliability co-efficient. Both the descriptive and inferential statistics were employed for providing answers to the research questions and hypotheses, respectively. The inferential statistics used were the t-test and Pearson's product Moment Correlation (PPMC). Table 1 presents the population and sample size for the study:

Table 1: Population of the Study

Sr. No.	Universities	Population
1.	University of Ilorin, Ilorin	40,609
2.	Kwara State University, Malete	9,632
3.	Alhikmah University, Ilorin	2,889
Total		53,130

Table 2: Sample Size (Raosoft Sample Size Calculator)

Sr. No.	Universities	Percentage Selected	Sample
1.	University of Ilorin, Ilorin	76.4%	292
2.	Kwara State University, Malete	18.1%	69
3.	Alhikmah University, Ilorin	5.5%	21
Total		100.0%	382

Academic Planning Offices (2021).

DATA PRESENTATION AND ANALYSIS

This segment provides the tabular representation of the data in respect of the research questions and their analysis.

Table 3: Demographic Characteristics of the Respondents

Items	Frequency	Percentage (%)
University		
University of Ilorin, Ilorin	277	77.4
Kwara State University, Malete	62	17.3
Al-Hikmah University, Ilorin	19	5.3
Total	**358**	**100%**
Gender		
Male	209	58.4
Female	149	41.6
Total	**358**	**100%**
Age		
Less than 20 years	237	66.2
21-25 years	98	27.4
26-30 years	20	5.6
31 years and above	3	0.8
Total	**358**	**100%**
Level of Study		
100 level	65	18.2
200 level	97	27.1
300 level	105	29.3
400 level	78	21.8
500 level	13	3.6
600 level	-	0.0
Total	**358**	**100%**

Field Survey (2021).

Table 3 shows that 277(77.4%) of the respondents were from the University of Ilorin, 62(17.3%) from Kwara State University and 19(5.3%) and from Al-Hikmah University, indicating that the majority was from the University of Ilorin. Regarding gender, 209(58.4%) was males while 149(41.6%) were females, depicting a male-dominated group of respondents. Furthermore, 237(55.2%) were less than 20 years, 98(27.4%) were between 21-25 years, 20(5.6%) between 26-30 years and only 3(0.8%) were 31 years and above. This shows that most respondents were less than 20 years. Also, 65(18.2%) of them were in 100 level, 97(27.1%) in 200 level, 105(29.3%) in 300 level, 78(21.8%) in 400 level and 13(3.6%) in 500 level; showing that 300 level students were in the majority. Clearly, none of them were in 600 level.

Table 4: E-Resources Availability in the University Libraries (N=358)

Items	Frequency	Percentage (%)
Online Public Access Catalogue	210	58.7
CD ROM database	65	18.2
Electronic journals	114	31.8
Internet service	329	91.9
Online databases	273	76.3
Electronic books	88	24.6

Field Survey (2021).

Table 4 provides the respondents' indication of the availability of OPAC with 210(58.7%) respondents, CD-ROM with 65(18.2%), e-journals with 114(31.8%), Internet service with 329(91.9%), Online databases with 273(76.3%) and e-books with 88(24.6%) responses. This show that majority of them indicated that Internet service is available in their university libraries while CD-ROM database has the least number of responses.

Table 5: Influence of Undergraduate Students' Age on Utilization of E-Resources

Items	Scales							
	Strongly Agreed		Agreed		Disagreed		Strongly Disagreed	
	N	%	N	%	N	%	N	%
Consistency with the use of e-database	124	34.6	175	48.9	37	10.3	22	6.2
Expertise in the use of Internet	148	41.3	189	52.8	11	3.1	10	2.8
Frequent use of computer	165	46.1	151	42.2	18	5.0	24	6.7
Skills in the use of e-journals	130	36.3	191	53.4	10	2.8	27	7.5
Attitude towards the use of e-resources	65	18.2	54	15.1	113	31.6	126	35.2

Field Survey (2021).

Table 5 shows that the majority 299(83.5%) of the respondents indicated younger age consistency with the use of e-databases more than the older age group, more frequent usage among them than any other age groups; just as there was more expertise in Internet use among the younger age group 337(94.1%) than their older counterpart 21(5.9%). Similarly, 316(88.3%) indicated that older students are more likely to use computer less frequently while 321(89.7%) also indicated that the younger ones are more skilled in the use of e-journals; just as the data show that 119(33.3%) agreed that age can influence their attitude towards the use of e-resources.

Table 6: Influence of Undergraduate Students' Gender on Utilisation of E-Resources

Items	Scales							
	Strongly Agreed		Agreed		Disagreed		Strongly Disagreed	
	N	%	N	%	N	%	N	%
Unequal gender competence	107	29.9	131	36.6	75	20.9	45	12.6
Gender differences in Internet use	93	26.0	115	32.1	89	24.9	61	17.0
Socio-cultural background	74	20.7	96	26.8	102	28.5	86	24.0
Gender differences in the use of e-library	81	22.6	95	26.5	93	26.0	89	24.9
Gender influence attitude towards use	68	19.0	66	18.4	125	34.9	99	27.7

Field Survey (2021).

Table 6 shows that the majority 238(66.5%) indicated that there was unequal gender competence in the use of e-databases between male and female respondents. Also, 208(58.1%) of them agreed that female students are not accustomed to the use of Internet like their male counterparts, which indicated that more than half of them were of this view. Similarly, 170(47.5%) of them signified that socio-cultural background of male students affects their use of Internet more than female students. Another 176(49.1%) agreed that male undergraduates use the e-library than their female counterparts, while 134(37.4%) agreed that their gender influenced their attitude towards the use of the e-resources.

Table 7: Influence of Undergraduate Students' Level of Study on Utilization of E-Resources

Items	Scales							
	Strongly Agree		Agree		Disagree		Strongly Disagree	
	N	%	N	%	N	%	N	%
Computer usage	65	18.2	71	19.8	108	30.2	114	31.8
Differences between fresh and returning	168	46.9	125	34.9	41	11.5	24	6.7
Use of OPAC	88	24.6	95	26.5	92	25.7	83	23.2
Influence of level of study on Internet	51	14.2	37	10.3	119	33.2	151	42.2
Use of electronic database	98	27.4	115	32.1	84	23.5	61	17.0

Field Survey (2021).

Table 7 shows that 136(38.0%) respondents agreed that use of computer by the students is influenced by their level of study while 293(81.8%) agreed that fresh students do not use the e-resources frequently as returning students. Meanwhile, 183(51.1%) considered their level of study as one affecting OPAC use and another 88(24.5%) related the use of Internet with their levels of study, even as 213(59.5%) others indicated that those in their late years of study use e-databases more than those in their early years of study.

Table 8: Influence of Undergraduate Students' ICT Skills on Utilization of E-Resources

Items	Scales							
	Strongly Agree		Agree		Disagree		Strongly Disagree	
	N	%	N	%	N	%	N	%
Need for ICT skills to use computer	172	48.0	133	37.2	15	4.2	38	10.6
Computer literacy of students	144	40.2	189	52.8	07	2.0	18	5.0
Information retrieval skills	150	41.9	141	39.4	46	12.8	21	5.9
Use of CD-ROM database	101	28.2	108	30.2	93	26.0	56	15.6
ICT use to maximally utilize e-resources	170	47.5	154	43.0	21	5.9	13	3.6

Field Survey (2021).

Table 8 shows that 305(85.2%) of the respondents agreed that the students need ICT skills to use computer while 333(93.0%) agreed that their computer literacy can influence their e-resources' utilization. Furthermore, 291(81.3%) of them agreed that students' information retrieval skills determine the utilization of e-databases and also indicates that 209(58.4%) others agreed that ICT skills can influence the use of CD-ROM databases even as 374(90.5%) agreed that the students need to possess adequate ICT skills to maximally utilize e-resources.

Test of Hypotheses

H_{01}: There is no significant difference in male and female undergraduate students' utilisation of e-resources.

Table 9: Significant Difference in Male and Female Students' Utilisation of Resources

	Gender	N	Mean	Std. Deviation	Std. Error Mean	P-Value
Utilisation of e-resources	Male	209	3.3493	0.42867	.02965	
	Female	149	1.8872	0.57766	.04732	0.03

Field Survey (2021).

Table 9 shows the significant difference in male and female students' utilization of resources. However, the P value is 0.03 which is less than 0.05 level of significant. Therefore, the null hypothesis is hereby rejected; hence, showing that there is a significant difference in male and female students' utilization of e-resources.

H_{02}: There is no significant relationship between students' ICT skills and the utilization of e-resources.

Table 10: Relationship between Students' ICT Skills and Utilization of E-Resources

Variables	Mean	SD	N	Df	R	P-Value	Remark
ICT skills	3.1469	0.82440	358	356	.932**	.000	Sig…
Utilisation of e-resource	2.7408	0.87535					

** Correlation is significant at 0.01 level (2-tailed).

Field Survey (2021).

Table 10 shows that the Pearson's R is 0.932, while the p=0.000, which is lower than the common level of significance of 0.05. The null hypothesis is hereby rejected; hence, showing that there is a significant relationship between students' ICT skills and the utilization of e-resources.

DISCUSSION OF THE FINDINGS

On the availability of e-resources in the universities studied, the findings show that the Internet is the most common e-resources available in the universities. This buttresses the opinion of Okiki and Asiru (2011) that the Internet was the most famous of the resources as it provides unrestricted access to e-books and e-journals, databases and search engines. Also, Onwubiko (2022) affirmed this view, pointing to the fact that the advent of the Internet had resulted in apparent changes in the ways information items are gathered, processed, stored, conserved, and communicated to the users. Thus, Bajpai and Margam (2019) confirmed that library personnel should possess a sound understanding of new digital capabilities needed to enable them have extensive Internet and IT skills to allow them access online resources, troubleshoot, and provide reference services through e-mail and other social networking technologies.

On the influence of undergraduate students' age on utilisation of e-resources, the findings revealed that undergraduates of younger age are regular with the use of e-databases more than the older ones. This is in line with the position of Diyaolu, Okunlaya and Ibrahim (2015) that younger students see themselves as experts in using e-resources than the older students. Similarly, Shaqour and Daher (2013) also agreed that younger users are more enthusiastic adopters of e-resources than older users. Moreover, the findings showed that undergraduate of younger age displayed more expertise in the use of Internet compared to the older students.

On the influence of students' gender on utilization of e-resources, the findings revealed that there was unequal gender competence in the use of e-databases. This supported the observation of Susol and Steinerova (2007) that research on gender differences still remains open; implying also that female undergraduate students are not accustomed to the use of the Internet like their male counterparts. Similarly, it was found that socio-cultural background of male students did not affect their use of Internet more than female students, even as male students use e-library than their female counterparts while students' gender does not influence attitude towards the use of the e-resources. This was supported by Quadri (2013) who found that there was a significant relationship between age and use of online library resources.

On the influence of undergraduates' level of study on the utilisation of e-resources, the findings revealed that the use of computer by the students was influenced by their level of study and the new students do not use the e-resources frequently like the returning ones. This was consistent with the findings of Owolabi, Idowu, Okocha and Ogundare (2016) that undergraduate students in 300 and 400 levels of study utilize e-information resources more those at the early stage; even as the study revealed that students' level of study did not affect their use of OPAC. On their ICT skills as a predictor of e-resources' utilization, the findings revealed that the majority agreed that their competence and dexterity in ICT are essential requirements for the use computer. In line with the finding, Oyeniyi, Oyeniran, Adebayo and Oyeniran (2020) also underscored the fact that the use of ICT has become increasingly important in academics and libraries are switching over to ICT-based resources and services at an accelerated pace.

This is consistent with the findings of Bakkabulindi, Sekabembe, Shopi and Kiyingi (2012) that there was the need to be vast in ICT skills for them to make a good use of the computer; just as their computer literacy skills were found to be related to e-resources' utilization while it was found that Internet service was utilized, to a very large extent. This was also similar to those of Emwanta and Nwalo (2013) that Internet is the most consulted e-resources by students. To buttress this finding, Gor, Mbwesa, and Charles (2016) asserted that consulting the Internet was the most significant purpose that students use the library for (Onwubiko, 2022). According to Bajpai and Margam (2019).

On the research hypotheses tested, the two null hypotheses tested were rejected. This means that there was a significant difference between male and female students' utilisation of e-resources. This contradicts the findings of Alshankity and Alshawi (2008) that there was no significant gender difference in the overall Internet usage among faculty members in Saudi Arabia. It was also revealed that there was a statistically significant difference in students' age and utilisation of e-resources.

CONCLUSION AND RECOMMENDATIONS

The findings of the study established that both age and gender of the undergraduate students determined their use of e-resources and that ICT skills were required by the students for better exploitation and exploration of library information resources. Based on the findings and conclusion reached, the study recommends that:

- The undergraduate students should be sensitized on the available e-resources in the library as it was revealed that some of the students are not aware of the availability of e-resources such as CD-ROM and electronic books;
- The Library managements of the universities under study should carry out an advocacy campaign that will focus on older students in order to ensure that they consult e-resources like the younger students do;
- The libraries mount advocacy programs to enhance female students' improvement in the utilization of e-resources;
- There should be a reenergized effort in ensuring that new students are made aware of the availability of e-resources in the university libraries; as it was found that they do not use e-resources like the returning and/or older students;
- The students should be trained more on their ICT skills in order to propel them to make better utilization e-resources towards their academic and other information needs; and
- Training on computer literacy skills and information retrieval skills for the students should be mounted to help them improve on the utilization of e-resources in these university libraries.

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