

## **Assessment of Digital Literacy Competencies of Undergraduate students of Bayero University Kano, Kano State, Nigeria**

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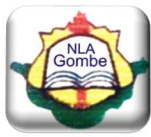
### **Abstract**

*The study investigated the digital literacy competencies possessed by undergraduate students at Bayero University, Kano. The study also examined the extent to which the students use digital information resources in their learning and academic activities. Descriptive survey research design was adopted for the study. The population for the study was 8090 students for 2018/2019 academic sessions. Questionnaire was used for data collection. The research advisor was used to select the sample size of 370 undergraduate students. A total of 370 copies of questionnaires were distributed across 17 faculties in the university with a retrieval success of 333 copies, which represents the return rate. Data were analyzed using descriptive statistics. Findings of the study revealed that the majority of the undergraduate students of BUK use digital information resources for academic purposes. They are not fully aware of the digital resources available in the university library and the resources are not adequately utilized. Also the respondents possess low digital literacy competencies. Based on the findings, it was recommended that the information needs of students should be identified at regular intervals and relevant resources be made available to meet such needs. University library should intensify its awareness campaign on the availability of DIRs in the library. Lecturers should encourage students to use DIRs for course work in order to facilitate frequency of use of the resources. Students should also be encouraged to engage in academic research using available digital resources, while confidence levels of students in using media should be challenged by exemplifying the use of electronic media resources among lecturers to deliver lectures.*

**Keywords:** Digital Literacy, Digital Information Resources, Undergraduates, Bayero University Library; Kano, Nigeria

### **Introduction**

Globalization and continuous development in digital technology has necessitated that students must be digitally literate to be able to navigate the multi-faceted and fast-paced digital environment. Digital literacy (henceforth: DL) is vital for information access as well as retrieval of relevant and up-to-date resources for students' learning and research activities. Shrestha (2018) noted that today's technological changes in the society require multi-skilled individuals, who are able to think critically and solve problems. Therefore, to function effectively in this contemporary information-rich society, students should have composite skills to create, collaborate and share digital content responsibly. They should be able to handle Information and Communication Technology (ICT) tools, make informed judgment about information found, perform tasks and solve problems in digital environment. Digital literacy has been defined by Ala-Mutka (2011) as an emergent literacy, which is partially overlapping with Internet literacy, Computer or ICT literacy. American Library Association (ALA), Digital Taskforce (2011) stated that a digital literate person possesses technical and cognitive skills required to find, understand, evaluate, create and communicate digital information in a wide variety of formats. A digital literate person is also able to use diverse technologies appropriately and effectively to retrieve information, interpret results and judge the quality of that information. In view of this, Awari and Krishnamurthy (2017) stated that DL helps in building academic excellence; it provides various benefits to the academic and



research community. These benefits include: access to information resources, retrieval and speedier dissemination of information. Digital technology has pervaded every aspect of our lives and has changed how we seek and gain access to information resources.

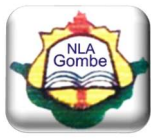
In developed countries, universities are continuously updating their curriculum for DL to keep up with accelerating technological developments (Emiri 2015). Similarly, Frydenberg (2015) observed that the need for today's students to be digitally literate is growing and educational organizations worldwide have responded with new curricula to teach DL skills. This will enable students to be equipped with DL skills to be able to effectively access and use digital information resources for progress in their learning and research activities.

However, studies have shown that in Africa and by extension in Nigeria, students are lagging behind in the acquisition and use of DL skills due to incessant power supply, low Internet bandwidth, lack of ICT facilities as well as lack of development of DL program and standard (Ukwoma, Iwundu and Iwundu (2016). In addition, Ecosystem Dialogue Series (2019) observed that DL faces challenges in Nigeria because there is lack of implementation of strategic plans towards promoting DL. Moreover, educational curriculum does not really reflect the component of DL that would be valuable in the future of work. Shopova (2014) emphasized that with limited or no DL skills; people will not be able to access computers, databases or Internet. Thus leaving them at total disadvantage with negative impact and creating wider void or information gap.

Undergraduate students have heavy workload; hence they search for information from several sources, including digital resources to support their learning and research activities. Issa, Amusan, Olarongbe and Oguntayo (2015) stated that undergraduates need information for their educational pursuits. University libraries are expected to provide DIRs based on the information needs of its anticipated users. However, for users to be able to retrieve relevant and up-to-date information to satisfy their information needs, possession of DL skills becomes imperative. In view of this, Adeoye and Adeoye (2017) emphasized that undergraduates need skills such as Information Literacy Skills (ILS), Information and Communication Technology (ICT) literacy and Media Literacy Skills (MLS) to identify and effectively use digital information resources.

Emiri (201) defined Digital Information Resources (henceforth: DIRs) as those information resources that can only be accessed by the use of computers and other ICT devices. The different types of digital resources available include: Compact Disc Read Only Memory (CD-ROM), Internet resources, Online Public Access Catalogues (OPAC), electronic books, electronic journals, electronic index, online database, e-mail publishing, wireless publishing, electronic link and web publishing. Odede and Jiyane (2019) stated that DIRs are valuable tools for studying, learning and research because the resources contain current information that can be updated and used frequently. Moreover, the resources offer advanced search capabilities and enable access to information without restrictions of time and location. An individual can access DIRs from a café, office or even from the comfort of ones home conveniently at anytime.

However, the use of DIRs depends on the competencies in using the resources. Hence, one can argue that the frequency with which undergraduate students seek and use relevant DIRs when studying, preparing for exams or conducting research correlate with the level of DL skills they possess. To support this, Mutshewa (2008) stated that skills are improved through practice and frequent use of information retrieval system such as electronic database resources. Therefore, for undergraduate students to retrieve relevant and up to date DIRs to



satisfy their information needs, they should be able to identify the types of DIRs available for use and have frequent activity with digital information retrieval system.

Odu and Omosigbo (2017) posit that possession of DL skills has become necessary requirement for deriving maximum benefit from a digitized or digital library. It is also recognized that learners need to engage in cognitive complex tasks involving such activities as problem solving, critical thinking, collaboration and self-regulation (Shopova 2014). With these skills, students will be more equipped for surfing the net, blogging, social networking, instant messaging, information use and sharing as well as other digital related activities. It is in view of this, that this study investigates the level of DL skills of undergraduate students of Bayero University Kano to effectively use the different types of DIRs available for use.

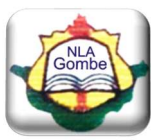
### **Background of the Study**

Bayero University, Kano (BUK) is a conventional non-profit public university, in Kano, Kano state, Northwest Nigeria. It is one of the initial 12 universities founded in Nigeria by the Federal Government in 1975. The University has 17 faculties and runs programs in different types of academic disciplines. It also awards degrees in both single and double honors (Bayero University, Kano Annual Report 2019). The university library supports teaching, learning and research activities of the university community. It provides different types of DIRs, which include: e-books, e-journals, e-databases, digitized theses, e-reference materials, e-newspapers, digitized past question papers, CD-ROM databases, digitized manuscripts and Compact Discs. Access and use of the university's digital resources can be done either in the library, using the library's ICT facilities or personal computers, smart phones and laptops. The resources can also be accessed in the hostel, lecture theaters or at home, with the aid of user name and password issued by the university library Automation and Multimedia Department. The library provides library orientation and user education to all students. It also creates awareness of the availability of digitized resources of the university library through the university bulletin, libri update as well as a pamphlet, which explains a guide to the use of the library. The university library maintains usage statistics register for both print and DIRs of the library. This is done in order to track the level of use of the university library resources.

### **Statement of the Problem**

As the availability of DIRs continues to rise within institutions of higher learning, undergraduate students are expected to be digitally competent to be able to use the resources of their respective university libraries. Digital competence has been recognized as a fundamental basic skill in ICT (European Parliament and the Council, 2006). According to UNESCO (2018) the importance of DL is evidenced by the many national and regional efforts to develop and implement DL frameworks and strategic plans to bolster citizens' DL. In addition, Shopova (2014) stated that for university students, it is necessary to have knowledge and skills in the field of technology to be able to use information effectively and work critically with information resources found. University libraries should also provide DIRs based on the information needs of students if the students are to use the resources to satisfy their information needs.

However, in spite of the potential benefits of DL skills to the academic community and the opportunities brought by DIRs, skills for the application of ICTs have not been fully developed in most African educational institutions (Adam, 2003). Moreover, these institutions are still confronted with a dilemma of turning on-going ICT initiatives into opportunities for understanding what digital literacies really mean to the transformation of education in general and specifically, to teaching and learning (Adam, 2003). In Nigeria,



access and use of the DIRs is still much lower because there is lack of utilization of DL skills in our libraries (Emiri 2015). Adeoye and Adeoye (2017) stated that today's generation of students use digital objects such as smartphones, laptops etc. for entertainment, communicating, social networking as well as accessing the Internet; but frequently fail to search and locate information sources that are related to their academic activities. These have constituted a great challenge to the use of DIRs by undergraduate students. In addition, being a staff in the university library in BUK, the researcher observed from the usage statistics register maintained by the university library, that there was low use of DIRs of the university library compared to number of library registered undergraduate students. This could be as a result of poor DL skills and competences.

Accordingly, it is based on this that the study seeks to have a better understanding on the nature of students' information needs, find out the types of DIRs available for use in the university library, ascertain the frequency of use of DIRs and the level of digital competencies possessed by undergraduate students of BUK with reference to utilization of DIRs of Bayero university library, Kano, Nigeria.

### **Research Objectives**

The research objectives are outlined as follows:

- 1) To identify the information needs of undergraduate students of Bayero University, Kano
- 2) To find out the various types of DIRs available in the university library under study;
- 3) To ascertain the frequency of use of DIRs by undergraduate students in the university under study;
- 4) To determine the level of DL competencies possessed by undergraduate students in the university under study.

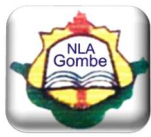
### **Research Questions**

The following research questions guided this study

- 1) What are the information needs of undergraduate students of Bayero university, Kano?
- 2) What are the various types of digital information resources available in the university under study?
- 3) What is the frequency of use of DIRs by undergraduate students in the university under study?
- 4) What is the level of DL competencies possessed by undergraduate students in the university under study?

### **Review of Related Literature**

Digital Information Resources (DIRs) cover a wide range of information resources that can only be accessed by the use of computer and other ICT devices. Haridasan and Khan (2009) stated that DIRs refer to any digital or electronic product that delivers collection of data either in text, numerical, graphical or time based, as commercially available resources. DIRs are indispensable to undergraduate students because the resources are capable of satisfying their various information needs; such as preparing for examinations, class assignments, and lecture notes self-development. Deng's (2010) study confirmed this, where it was found in the study that there were various purposes for which e-resources are used. These include: for gathering information on a specific topic, gaining general knowledge, obtaining answers to specific questions, completing assignments, reviewing literature, writing essay and helping decision making. Similarly, Issa, Amusan, Olarongbe, Igwe and Oguntayo's (2015) study revealed that undergraduate students need information for their educational pursuits.



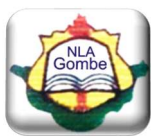
Reiterating the advantages of DIRs, Odede and Jiyane (2019) stated that DIRs are valuable tools for study, learning and research. The resources contain current information and can be updated frequently. In addition, DIRs offer flexibility in searching and storage of results. The resources also offer advanced search capabilities and enable access to information without the restriction of time and location. Sharma (2009) confirmed that DIRs are increasingly available in Nigerian universities thereby making it possible for students to access and use current as well as relevant materials for studies, research and learning.

However, for undergraduate students to reap the benefits of DIRs, they need to be digitally literate. Shweta and Mallaiah (2017) defined DL as ability to properly use and evaluate digital resources, tools and services. In view of this, digital literacy can be viewed as a prerequisite to effective use of digital technology in all spheres of life. Ala-mutka (2011) defined DL as an emergent literacy, which is partially overlapping with Internet literacy, computer or ICT literacy. American Library Association's Digital Literacy Task Force (2013) also defined DL as the ability to use ICTs to find, evaluate, create and communicate information, requiring both cognitive and technical skills. The task force further stated that a digitally literate person possesses a variety of skills and uses diverse technology to search and retrieve information. He/she also interprets search results, judge the quality of information retrieved, understand the relationships among technology, uses these skills and the technology to communicate and collaborate with others, while participating actively in civic society.

In defining the framework of digital competence, Ferrari (2012) stated that being digitally competent imply that an individual possess the ability to understand media, to search for information and be critical about what is retrieved. A digital literate individual should be able to behave in an ethical way, effectively communicate with others using a variety of digital tools and applications. In her opinion, having technical skills at the core of a digital competence model does not give enough importance to other equally relevant aspects. Therefore, digital competence should be understood, in its wider sense, as a multifaceted concept, which focuses on primarily on solving problems, building new knowledge, through technology and media in critical creative, flexible and ethical manner.

According to Carretero, Vuorikari and Punie (2016) in: Information paper no. 51 (2018), knowledge, skills and attributes of DL could be identified in several recent models and frameworks. One of such frameworks is that of European Commission's Digital Competence Framework 2.1, which McGuinness and Fulton (2019) described as structured dimensionally having five "components of digital competence"; which include 'information and data literacy, communication and collaboration, digital content creation, safety and problem solving'. Specific hub competences can be measured across eight levels of proficiency within these categories.

Although possession of technical skills is an aspect of DL, one cannot ignore the fact that individuals must also possess cognitive and information skills that are pivotal for the Google/Net generation, to enable them make responsive choices. Thus, digital skills may include critical thinking, creativity, collaboration, communication, IL, media literacy, technology literacy and flexibility. This made it to be considered as a blend of several literacies required for operating in the digital environment. Addressing DL, Shrestha (2018), concludes that there is inconsistency in understanding the term that has been creating confusion; thus the term 'DL' should be referred in its plurality form as 'digital literacies, which would benefit in understanding the term.



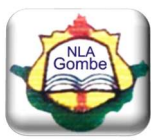
To these regards, the present study adapts the framework provided by Ferrari (2012) and directs its attention on the skills needed to identify, search, find, access and retrieve information. The study would also look at undergraduates' ability to participate in networks, communicate through online tools, ability to use DIRs ethically and in a responsible way, ability to assess information, solve problems or complete tasks and ability to effectively make correct use of technology and media.

Studies have been conducted on DL skills and competences in several countries. For example, in Europe, McGuinness and Fulton (2019) investigated factors that affect user engagement with digital learning objects and explore students' perceptions of the role of online learning within their academic programs. Eighty-six (86) students completed the questionnaire, which consisted of twenty-three (23) closed-ended and open-ended questions. Findings revealed that majority of the students rated their digital literacy as good to excellent. The e-tutorials proved to be a successful addition to blended learning in the schools. In view of this, the task that is placed in front of today's undergraduate students has to do with learning the concepts, theories and basic knowledge of different disciplines and with understanding of all necessary criteria and strategies to find relevant information that is valid for their area of their study or research.

In response to the problems related to the effective use of new ICTs, in education and training in Europe, Shopova (2014) investigated the key role of digital literacy and the skills of students to use new technology. Findings revealed that the majority of the students have no skills needed to take advantage of the electronic library at the university and do not know how to use its rich information resources. Only (48%) of the respondents recognize they have difficulty with critical and creative attitude towards information and its usage in ethical manner. Many of the students do not know how to interpret the reference of a paper or how to search database effectively. The students rely heavily on one search engine to find information on the web; they copy directly from the web without acknowledgement. The respondents are also not aware of the ethical issues related to copying and citing when they use various sources to prepare their essays. Finally, the students are not motivated to participate more actively in organized course at the university.

The result of the study conducted by Pratap and Singh (2018) on digital literacy skills among students and research scholars in India revealed that a greater part of the respondents use digital resources daily. Also, 58(49%) of the respondents were using digital resources to update their subject knowledge in the field. The study concludes that digital literacy should be integrated in educational core curriculum to appropriate utilization of digital information resources.

Awari and Krishnamurthy (2017) posited that digital literacy enable individuals to make use of digital technology in all spheres of life. Keeping this trend in view, they conducted a study on digital literacy among postgraduate students of university of Agricultural sciences, Dharwad. The study found that majority (79.34%) of the students own smart phones to access the Internet. Majority (69.66%) of the respondents make use of the Internet on a daily basis. While for the purpose of use of the Internet, (79.34%) stated that they use the Internet for academic works. However, only 34.78% of the students were aware of web portal. All (100%) the respondents stated that their preferred search engine was Google. The respondents' awareness about different search strategies was poor, as they knew only about concept search (47.82%) and Boolean search (41.39%). Findings of this study indicates that the students are using digital devices and other applications for either personal use or entertainment, however, their ability to use them for learning purposes was minimal.



Baro, Obaro and Aduba (2019) investigated the DL skills possessed by library and information professionals working in various libraries in English speaking countries in Africa. Findings revealed that the respondents rated their level of DL skills to be moderately low. With regards to database search skills, uploading documents to online platforms, skills in applying new technologies into library services, ability to create different file formats and ability to use open source software, respondents rated their skills very high. While on the other hand, metadata development skills and library website development skills were rated moderate and low respectively

Takavarasha, Cilliers and Chinyamurindi (2018) investigated the challenges faced by the South African millennial as they navigate the unbeaten track from digital literacy to digital citizenship, using activity theory. The study adopts mixed survey research method, using questionnaire and interview. A total of 148 questionnaires were administered to the respondents. The findings from the study revealed that the university-going millennial acquire digital literacy, however, their development of digital citizenship is affected by lack of mentors and access at home as well as lack of soft skills training at the university.

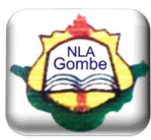
In Nigeria, Adeoye and Adeoye (2017) report on a survey on the digital literacy skills of undergraduate students in federal universities in Southwest Nigeria using multiple literacies (information literacy, information and communication technology and media literacy). Findings of the study revealed that majority of the students admitted that they are confident on the levels of their ILS, ICT and media LS. The study concludes that lecturers should encourage students to engage in academic research using EIRs on the web without committing plagiarism. In addition, students should be encouraged to open and operate online Blog for public access in order to enhance their ICT skills, while lecturers should endeavor to use electronic media resources to deliver lectures in order to challenge the confident level of undergraduate students in using electronic media.

Emiri (2015) investigated contemporary digital literacy skills among librarians in Edo and Delta state university libraries, Southwestern Nigeria. Findings revealed that electronic mailing, social networking, use of PDAs, mobile phones and Internet surfing were among the major DL skills among librarians. However, the level of use of the digital literacy skills was low.

The literature reviewed has indicated some knowledge and research gaps as the existing body of literature on previous researches conducted concentrated on problems related to effective use of ICTs in education and training, digital citizenship, issues that affect user engagement with digital learning objects as well as role of online learning within the academic programs. Several studies have been conducted on digital competencies in developed and developing countries of the world and precisely, Nigeria. However, this study is unique because, it seeks to assess the level of digital literacy skills of undergraduate students within the geographical space of Bayero University, Kano. The study also seeks to identify their information needs, DIRs available for use, frequency of use as well and the DL competencies they possess for effective use of DIRs.

### **Significance of the study**

The outcome of the study would reveal the information needs of students to the university librarians. This would further facilitate provision of relevant DIRs to satisfy the information needs of students. It would also contribute to increase undergraduates' frequency of use of the resources, thereby, facilitating acquisition of DL skills and competencies. In addition, the students would also know the level of their digital competencies so that they become



challenged to improve in areas where deficiencies are identified. It will also show the librarians and lecturers which specific skills of the students they should pay more attention to. Furthermore, the study would guide university library management in the area of budgetary provision, which may lead to increased fund allocation from the university management. The study findings may also be of value to future researchers, as it would widen their horizon of knowledge. Finally, the study would contribute to building up of existing body of literature on digital literacy and DIRs.

### **Scope and Limitation of the Study**

This research is confined to only one institution (Bayero university, kano) and respondents were drawn only from undergraduate students. To this regards, the results of this study cannot be generalized to postgraduate students and other universities. The responses may also be affected by human bias and prejudice since the data collected was through self-report by the students.

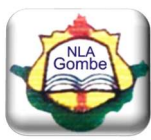
### **Methodology**

Descriptive research design was adopted for the study. The population of the study comprises 8,090-registered undergraduate students for 2018/2019 academic year spread across 17 faculties. The research advisor Table (2006) was used to determine the sample size of the study. The population (8090) of the study falls within the range of 10000 on the Advisors' Table. Consequently, the researcher selected 370 participants as suggested on the Table. The population distribution of the faculties was divided into strata and each stratum has the same sampling fraction. Thus the population of each faculty was divided by the total population, multiplied by the sample size 370 to ascertain number of questionnaire administered to the respondents in each faculty (e.g. Agriculture -  $420/8090 \times 370 = 19$ ). The instrument used to collect data was questionnaire, administered to the undergraduate students. Instruments used by previous researchers in related areas were consulted and adapted. Data collected was analyzed using simple descriptive statistics (frequency count and percentage). The study population and sample are presented in Table 1.

**Table 1: Study Population and Sample**

S/N	Faculty	Population	Sample Size
1	Agriculture	420	19
2	Allied Health Sciences	381	17
3	Arts & Islamic Studies	787	36
4	Basic Medical Sciences	450	21
5	Clinical Sciences	290	13
6	Communication	445	20
7	Computer Science & Information Technology	380	17
8	Dentistry	30	1
9	Earth & Environmental Sciences	126	6
10	Education	1895	87
11	Engineering	384	18
12	Law	209	10
13	Life Sciences	388	18
14	Management Sciences	690	32
15	Pharmaceutical Sciences	50	2
16	Physical Sciences	380	17
17	Social Sciences	785	36
<b>Total</b>		<b>8090</b>	<b>370</b>





**Source modified:** Management Information System (MIS) Unit, BUK (2019)

**Data analysis and discussion of findings**

**Response Rate**

Out of the 370 questionnaires distributed, only 333(90%) were filled, returned and found useful. Efforts to retrieve the remaining 37 proved abortive.

**Demographic Information**

The demographic profile of the students captured only sex. The result revealed slight male dominance; where 181(54%) were male, while 152(46%) were female, however, the margin was not very high, which shows that there was almost equal gender representation between male and female students that participated in the study.

**Table 2: Information needs of undergraduate students**

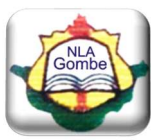
S/N	Types of Information needs	Yes		No	
		F	%	F	%
1	I need information for project writing	333	100	0	0
2	I need information to do course assignment	316	95.00	17	5.00
3	I need information for recreation and leisure	20	6.00	313	94.00
4	I need information to update my knowledge	310	93.09	23	6.91
5	I need information to enhance my lecture notes	296	89.00	37	11.00
6	I need information for class group discussion	169	50.75	164	49.25
7	I need information to prepare for test and examinations	204	61.26	129	38.74

**Source: Field Survey (2019). Key: F= Frequency, % = Percentage**

The responses captured in Table 2 revealed that the motive behind the need for information predominantly tilt more towards respondents' educational activities as all the respondents 333(100%) stated that they need information to carry out project work, majority, 316(95%) said they need information to do course assignment, 310(93.09%) to update knowledge, 296(89%) to enhance lecture notes, 204(61.26%) to prepare for test and examinations and lastly 169(50.75%) stated that they need information for class group discussion. However, it is significant to note that only 20(6%) need information for recreation and leisure. This finding corroborates Issa, Amusan, Olarongbe, Igwe and Oguntayo (2015) study and that of Pratap and Singh (2018), where they found that students need information basically for their educational pursuits, which include class assignment, research projects writing and general information needs. The implication of this finding is that information needs of undergraduate students is diverse, this compel them to search for information for various purposes. Hence, BUK university library must identify the information needs of the students; provide information resources, especially in digital forms to satisfy the information needs of the students.

**Table 3: Types of Digital information resources available in BUK library**

S/N	Types of information resources	Awareness	
		Frequency	Percentage
1	E-books	320	96.10
2	E-journals	310	93.09
3	Digitized theses	80	24.02
4	E-databases (online/offline)	169	50.75
5	CD-ROM data bases	38	11.41



6	E-references	26	7.81
7	E-newspapers	54	16.22
8	Digitized past question papers	176	52.85
9	Digitized manuscripts	10	3.00

**Source:** Field Survey (2019)

In Table 3, findings revealed that majority 320(96.10%) of the respondents were aware of the availability of e-books in the university library. 310(93.09%) of the respondents also admitted that that they were aware of the availability of e-journals, digitized past question papers 176(52.85%) and e-databases 169(50.75). However, very low percentages of the students are aware of digitized theses 80(24.02%), e-newspapers 54(16.22%), CD-ROM databases 38(11.41%), e-references 26(7.81%) and digitized manuscript 10(3.00%) respectively. Based on the number of digital information resources presented on the Table, it can be seen that the respondents were aware of only 4 out of the 9 digital information resources, which can be inferred that there is low level of awareness of the DIRs in the university library. Findings in the present study did not conform to that of Awari and Chrishnamurthy (2017), where they found that majority of students were aware of the Internet sources available in the University of Agricultural science library, Dharwad. The implication of this finding is that students may not make optimal use of the digital information resources to satisfy their information needs if they are not aware of the digital information resources available in the library.

**Table 4: Frequency of use of digital resources**

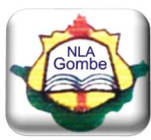
S/N	Frequency	No. of respondents	Percentage (%)
1	Daily	20	6.01
2	Once in two days	48	14.41
3	Thrice in a week	25	7.51
4	Ones in a week	180	54.05
5	Occasionally	60	18.02
6	<b>Total</b>	<b>333</b>	<b>100</b>

**Source:** Field Survey (2019)

Table 4 shows that majority, 180(54.05%) undergraduate students of BUK use digital resources of the library once in a week, 60(18.02%) use the resources occasionally, 48(14.41%) use the resources once in two days while 25(7.51%) use the resources thrice in a week and only 20(6.01%) use the resources on a daily basis. This result indicated that DIRs of the library are not adequately utilized. The result of the present study did not corroborate Pratap and Singh (2018) finding, which revealed that majority 78(86.67%) of the students uses digital resources on a daily basis, which signifies high patronage. The implication of the finding in the present study is that low frequency of use limits students' knowledge and narrows their horizon in specific subject areas, thus rendering them less capable of competing favorably with their global counterparts (Ukachi 2014).

**Table 5: Level of digital literacy competence of undergraduate students**

S/N	Statements	SA	A	D	SD
1	I can use ICT tools to search and Access information sources	192 (57.66%)	108 (32.43%)	26 (7.81%)	7 (2.10%)
2	I can operate application software E.g. spreadsheet, word processing	90 (27.03%)	115 (34.53%)	36 (10.81%)	92 (27.63%)
3	I can use digital objects such as CD-ROM, scanners, printers	160 (48.05%)	120 (36.04%)	41 (12.31%)	12 (3.60%)
4	I can articulate my information needs	110	88	64	71



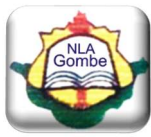
		(33.03%)	(26.43%)	(19.22%)	(21.32%)
5	I can browse, navigate and select online/offline resources for my use	65 (19.52%)	56 (16.82%)	138 (41.44%)	74 (22.22%)
6	I can use open source platforms to save digital content	64 (19.22%)	59 (17.72%)	80 (24.02%)	130 (39.04%)
7	I can create content, communicate and share information with others through social networking sites	46 (13.81%)	70 (21.02%)	100 (30.03%)	117 (25.14%)
8	I can apply copyright and privacy laws when using external information sources	56 (16.82%)	64 (19.22%)	163 (48.95%)	50 (15.01%)
9	I can recognize differences in databases and do database search without any assistance	98 (29.43%)	35 (10.51%)	100 (30.03%)	100 (30.03%)
10	I can effectively use Internet sources such as Wikipedia	50 (15.02%)	53 (15.91%)	165 (49.55%)	65 (19.52%)
11	I can use advanced search techniques e.g. Boolean operators to search for information	35 (10.51%)	44 (13.21%)	164 (49.25%)	90 (27.03)
12	I can use search engines to locate information	89 (26.73%)	95 (28.53%)	59 (17.72%)	90 (27.02%)
13	I can use other people's work online without committing plagiarism	74 (22.22%)	26 (7.81%)	200 (60.06%)	33 (9.91%)
14	I can use reference tools such as Mandalay for academic publishing	52 (15.62%)	22 (6.60%)	117 (35.14%)	142 (42.64%)
15	I can identify harmful web pages and differentiate between fake information and useful DIRs	20 (6.00%)	56 (16.82%)	204 (61.26%)	53 (15.92%)

**Source:** Field Survey (2019)

The result presented in Table 5 showed that out of the 15 items provided, only 5 (1,2,3,4 and 12) items have more than half affirmative responses, which indicates that the respondents possess only the digital literacy skills indicated in those numbers. The other 10 items (5,6,7,8,9,10,11,13,14 and 15) all have lower percentage scores, which shows that undergraduate students of BUK do not possess adequate digital literacy skills indicated in those numbers. On the whole, it can be inferred that undergraduate students of BUK were not confident in their level of digital literacy skills. Findings in this study did not corroborate with the findings of Adeoye and Adeoye (2017) where it was found that undergraduate students of the three universities studied are digitally literate because the students are confident on their level of information literacy skills, ICT literacy skills and media literacy skills respectively. Hence, the implication of this finding is that in depth digital literacy programs should be provided to undergraduate students of BUK to enhance the level of digital literacy skills possessed. This would eventually be of benefit to the students as it would facilitate use of digital information resources and would further prepare the students with capabilities that would assist them to face future challenges, especially when they graduate.

### Conclusion

The study concludes that undergraduate students of BUK need information for academic purposes. The students are not fully aware of the digital information resources available in the university library and the frequency of use of the DIRs of the university library is low. In addition, the students have low level of DL competences. Digital literacy is pivotal for this



Net/Google generation. It is a prerequisite for effective use of DIRs and a basic need for all students in this modern technology era, which brings new technological challenges on a daily bases. As information technology advances, DL is one of the vital and critical skills essential for all students in this 21<sup>st</sup> century. Therefore in order to with stand the challenges of digital revolution and make use of digital technology in all spheres of life, students should be equipped with the necessary digital skills and competences. They must know how to access, store and use digital resources available in the university library.

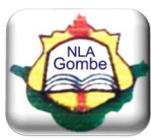
### **Recommendations**

Based on the findings of this study, the following recommendations are suggested to improve undergraduates' digital literacy competences and use of digital information resources:

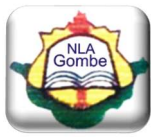
- The information needs of the students should be identified at regular intervals and relevant DIRs be made available to satisfy their information needs.
- The university library should intensify in its awareness campaign on the availability of the resources. It should organize orientation and training programs for creating awareness at frequent intervals in order to facilitate use of the available digital information resources.
- Lecturers should insist on students using digital information resources for course work and assignments; this would facilitate frequency of use of the resources.
- Students should be encouraged to engage in academic research activities using available digital resources; the students should also open and operate online Blog for public access, while confidence level of students in using media should be challenged by exemplifying use of electronic media resources among lecturers to deliver lectures.

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