



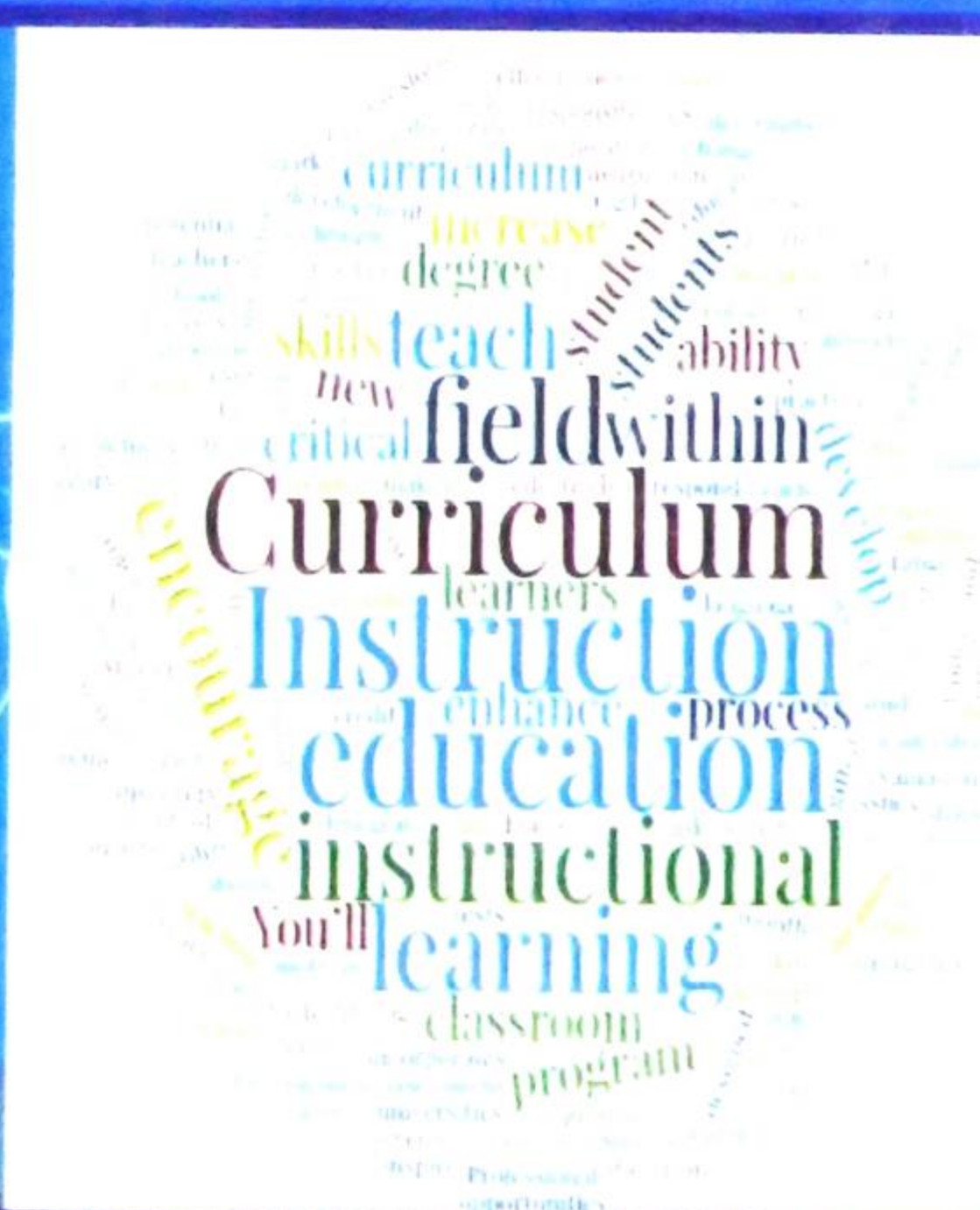
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theory and practice in learning with Technology**





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**Faculty of Education
Al-Hikmah University Ilorin
Igbaja Campus
Ilorin - Nigeria**

**Tel: +234 708 004 5019
+234 809 382 3389**

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Dr. Semiu O. Makinde

Managing Editor

Journal of Library, Science Education and Learning Technology (JOLSELT)

Faculty of Education

Al-Hikmah University Ilorin

Igbaja Campus

PMB 1601, Ilorin, Kwara State

Nigeria

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Notes for Contributors

The Journal of Library, Science Education and Learning Technology (JOLSELT) ISSN: 2705-3539; e-ISSN: 2705-3520 is published twice a year (June and October) by the Department of Science Education, Faculty of Education of the Al-Hikmah University Ilorin, Igbaja Campus, Nigeria. The Journal seeks submission of original articles on topics covering all aspects of Library and Information Science, Science Education, Learning Technology in Nigeria and the global community. Research or application-oriented articles that describe, among others, curriculum, pedagogy, professional development or educational facilities issues are considered for publication in this journal.

All articles are refereed by a rigorous review process involving at least two blind reviews by qualified academic professionals. Submissions are judged by the sustainability of the content, the intellectual framework and significance to society in general.

JOLSELT solicits only original contributions that have not been previously published or submitted elsewhere. An important criterion for acceptance of a manuscript for publication is the relevance of the work to the educational/training environment and its potential usefulness for advancing the quality of education at all levels.

JOLSELT only accepts electronic submission of manuscripts. Submit the manuscripts for the review process by sending an email with the paper as an attachment to jolselt@alhikmah.edu.ng and copy somakinde@alikhmah.edu.ng In the body of your email message, include the author(s) name(s), contact information of the corresponding author and the title of your submission. Your submission should be in a file format supported by Microsoft Word (**PDF submission will not be accepted**). All submissions should be in English. The manuscript should be single-spaced, with a single column, 12-point Time New Roman justified font, and 1" margins on all sides. A summary (Abstract) of between 150 and 250 words should be included in the first page of your submission.

Tables and figures should be included in the text, approximately where the author thinks that they should appear. Manuscripts should be edited for spelling and grammar. Reference citation ordering and format must follow APA style referencing. References must be complete. The paper should not normally exceed **10 single-spaced** pages of A4 size paper, including all sections, figures, tables, etc. However, long articles may be considered.

Editorial

The Journal of Library, Science Education and Learning Technology is, in this edition, continues to focus on broadening intellectual resources, understanding and developing an exchange of ideas among Liberians, Science educators, Technologists and Education professionals in general in order to offer intellectual contributions towards educational development globally.

This edition of the journal as a maiden edition features articles from Nigeria, Uganda, and Africa, with titles ranging from high-stakes, workforce education, pre-service teacher internet self-efficacy, valuation of the university course, innovative teaching, measurement of teaching skills, library & Information science to educational technology.

The authors present very interesting findings, implications and conclusions that are valuable to educational development. For instance, Dr. Adebayo and Balogun Omolara submit that the use of e-learning tools and technology in secondary schools can encourage students to effective learning and improve their academic performance significantly while Oladipupo Michael, Nuhu Kehinde, Ajani Adedeji and Ishola Ayodele focusing on development and usability of a developed Chemistry Learning-App. They concluded that undergraduates should complement learning with the use of a developed Learning-App to boost their performance.

Also, Dr. Amuda and Associate Professor Tella identify and discuss a number of challenges mitigating access to library resources and services such as Students' sole reliance on course materials and lecture notes as the number one barrier to the use of library resource; followed by other barriers which include; lack of information literacy skills, inadequate library facilities, lack of access to relevant information materials for their courses of study and lack of time due to their busy schedule at work.

Dr. Yusuf Suleiman, Tiffany Ivey, Dr. Bolaji and Dr. Makinde present an investigative study on digital competence in Spanish Secondary School as an indicator for academic performance. it was noted that science education and educational leaders, their leadership and innovations need urgent attention and concludes that a student that is acquitted with digital literate will be extremely functional, literate and numerate across the board with lifelong. Hence, there is a need for stronger competency-based learning and thematic approach pedagogy that will be geared towards students' competence improvement.

Read more about these articles and others from this journal – JOLSELT. I hope you will enjoy it.

Dr. S. O. Makinde

Managing Editor

@Department of Science Education, Al-Hikmah University, Ilorin, Nigeria

e-mail: jolselt@alhikmah.edu.ng

- Sirakaya, M. and D. A. Sirakaya, (2018.)“Trends in educational AR studies: a systematic review,” Malaysian Online Journal of Educational Technology, vol. 6, no. 2, pp. 60–74, retrieved from <https://www.hindawi.com/journals/ahci/2019/7208494/>
- Sirakaya, M. and E. K. Cakmak (2018). Effects of augmented Reality on Students Achievement and self-efficacy in vocational education training. International Journal of research in vocational education and Training (IJRVET) vol. 5 Issue 1 pp 1-18
- Stenger, M. (2017). Ways Virtual Reality Is Already Being Used in Education. Informed Teachers resource faculties. View at Google Scholar
- Tasneem Khan, Kevin Johnston, and Jacques Ophoff (2019). The Impact of an Augmented Reality Application on Learning Motivation of Students. Advances in Human-Computer Interaction Volume 2019, Article ID 7208494, 14 pages. Retrieved from <https://doi.org/10.1155/2019/7208494>
- The 3 Biggest Challenges for Augmented Reality. 2017.
Facebook0LinkedInTwitterEmailBuffer google plus.
C:\Users\User\Documents\wps office\The 3 biggest challenges for augmented reality - Augment News.mhtml. View from Google Scholar
- The Franklin Institute (2010) 271 North 21st Street Philadelphia, PA.79103. Retrieved from C:\Users\User\Documents\wps office\What's the Difference between AR, VR, and MR_ The Franklin Institute (1).mhtml
- Wu, H. Lee, S. W. Chang, H. And Liang, J. (2013). “Current status, opportunities and challenges of AR in education,” Computers and Education, vol. 62, pp. 41–49, View at Google Scholar
- Yuen, S. Yaoyuneyoung, G. & Johnson, E. (2011). Augmented reality: an overview and five directions for AR in education. Journal of Educational Technology Development and Exchange. 4/1 119-140

**CAN THE INTERNET BE A SUBSTITUTE FOR A LIBRARY?
PREFERRED CHOICE ANALYSIS OF INFORMATION AND
COMMUNICATIONS TECHNOLOGY SEARCH TOOL IN NIGERIAN
UNIVERSITIES**

OMONIYI, Joseph Olusegun, PhD

University Librarian

Kogi State University, Anyigba, Nigeria

jsomoniyi@yahoo.com

ADEWARA, Janet Oluseyi

Librarian II

University of Ilorin Library, Ilorin, Nigeria

&

ABDULRAHEEM, Jamiu Wankasi

Librarian II

University of Ilorin Library, Ilorin, Nigeria

ABSTRACT

This study is a response to the question about whether, or not, the Internet is a substitute for a Library. 1998 respondents from the Departments of English, Arabic and Library Science were selected from two Nigerian Universities. The researchers-designed questionnaire was used to obtain data from the respondents. Simple frequency counts, percentage distribution and t-test statistic were used to analyse the data. The study revealed that respondents had access to both the library and internet as information search tools; respondents possessed required skills to utilize the search tools; nevertheless, respondents faced more barriers using the internet than using the library. The study recommended that both the Internet and Library should be placed on equal pedestal as information search tools, and users should see the two tools as complementing each other; rather than perceiving and want to use the Internet as a substitute for a Library, users with deficient skills to operate the computer should be made to undergo remedial or refresher training in the application of computer to information search processes.

Keywords: Internet, Factual Library, Information search tools, Library information resources, Nigerian Universities.

INTRODUCTION

The invention of literacy and numeracy led to the establishment of the Library as a repository of all published and unpublished print and non-print information resources such as textbooks, research publications, journals, newspapers, magazines, periodicals, manuscripts, papyrus, scrolls and audio-visual resources and for academic, research, recreation and self-development purposes.

A library is described by Merriam- Webster Dictionary as a place in which literary, musical, artistic, or reference materials are kept for use and not for sale. The definition presupposes that a library has a physical structure of a building, factual information resources in print or non-print format, prospective users of the resources, catalogues (index) which serve as the pathfinder to the library resources, professional and non-professional librarians to superintend over the resources and their utilization, and printed guidelines on how the library, its resources and services should be used by clientele. In a factual library, book and non-print materials are arranged logically on the shelves to be accessed manually by clientele. Bibliographical details of the materials are equally arranged in a prescribed order in cards catalogues (index) which are also to be consulted manually for detailed information about the required materials before locating same on the shelves (Omoniyi, Adekola & Fola Adio, 2013).

According to Nwagwu (2007), factual library is the powerhouse of an ideal academic institution. As a repository of knowledge and the hub of any institution where intellectual activities are carried out, Oyinloye (2001) opined that every hour of lecture received by a student should be complemented by two hours of study time using the library. The library is essentially a service-oriented institution and the services it renders to its clientele derived sustenance from Ranganathan's five laws of the library: 1. Books are for use. 2. Every reader his (her) book. 3. Every book its reader. 4. Save the time of the reader and 5. The library is a growing organism. The laws presuppose that the library user is central to the library and the services that it provides to clientele because such users require some guide or assistance from library personnel to be able to locate information about library materials in the catalogue or on the shelves. The ultimate goal of a library is to provide information resources and services that its clientele can access with minimal inconveniences. To this end, libraries ensure that library guides, catalogues, indexes and various appropriate control mechanisms are put in place to promote hygiene, safeguard the security of library property and enhance library users' maximum satisfaction with the library as a search tool.

The invention of the Internet appears to have more positive impacts on library routines and service delivery. For example, Ogbuiyi, Oriogu, Momoh, and Ogbuiyi (2013) argued that the Internet is an Information and Communications Technology tool that has revolutionized library routines and service delivery from manual to the computerized or automated system. Ainley, Schulz and Fraillon (2016) asserted that preference for the Internet over a library is consequent on the fact that internet provides users with applications through which data can be collected and analyzed, create multimedia presentations, acquire a greater depth of knowledge about a discourse, vocations or learning activities on hand. According to these scholars, the Internet is one of the ICT tools which use digital communications tools and or networks to access, manage, integrate, evaluate, and create information in order to function in a knowledge society.

The focus of the International ICT Literacy Panel's submission emphasized the belief that Internet Literacy consists of cognitive processes that are associated with the principles of Information Literacy which is the application of Internet to locate, collect, evaluate, transform, create and analyse information and communicate ideas to the target audience (Mbagwu, Ozioko and Ogueri, 2017). It is however observed that these internet processes are substantially the same as what obtains in the factual library tradition over many centuries ago. These scholars were of the view that the internet form of information processes has been traditionally part of the manual information literacy search procedure and the manual procedure has, however, been substantially changed by the Internet because of the huge volumes and quantities of information resources that are available in the factual library.

Arising from the submissions against and in support of both the internet and library as information search tools, Herring (2001) however listed ten reasons why the factual library cannot be replaced by the internet. According to the scholar, it is not everything that one desires that is on the net. Similarly, one cannot search the entire web for information materials because many information resources have not been put on the web. Herring (2001) further submitted that there is no quality control of information materials on the web. That is, unlike the factual library in which various control mechanisms are put in place for the control of publications in its stock, anybody can just upload materials on the internet because the tool is free and unlimited web for anybody to navigate.

The scholar asserted that there is uncontrolled abuse of copyrights laws of e-book and e-journal publications on the internet. According to him, only about 20,000

titles of e-books were on the net before 1925; since 1970, about 50,000 additional titles have been published every year without any copyright restrictions to the multiplicity of such publications. Other reasons why the internet cannot be a substitute for a library as advanced by Herring (2001) include the health hazardous nature of e-book reader, the impossibility of creating a fully virtualized library system, the growing incredible high cost of having everything digitized, frequent dropping of materials of not more than fifteen years old from the web thereby preventing access to older materials, and, the widespread nature of the internet over-restrictive factual library system.

The advent of Information and Communications Technology (ICT) tools such as the Internet has broken the frontier of a geographical barrier which is the normal feature of the conventional factual library. Therefore, the Internet has made it possible to have instantaneous access to as many information resources as possible globally. This is a feat that has made the Internet a melting pot for harnessing academic, research, recreation and self-development information resources (Adekoya and Abari, 2003).

One of the conditions for using the internet and library as search tools by clientele is to have unhindered access to the myriad of information resources that are available for users to consult. But it is evident to these researchers that there are wide disparities in the extent to which both the search tools are available to interested users. For example, while the factual library utilization requires physical distance, very tedious and time-consuming manual procedures to access its information resources, the internet, on the other hand, contains information materials that are not catalogued, non-full text sites, truncated (missing) articles and, even, inaccessible texts. In spite of all the odds observed in the use of both the library and internet as search tools for information resources, these researchers intended to find out if the internet is really a substitute for the library as some university lecturers and students, particularly, in Nigeria might want to argue.

Theoretical Framework

These researchers adopted two theories in the study. Mc Luhan propounded the Global Village Theory in 1964 as a response to the impacts of ICT tools in the activities of man in the universe. In theory, McLuhan applied electronic means and described the globe as a contracted small village. In the global village, the movement of information to every point is instant and simultaneous. The theory thus placed less emphasis on the physical distance as a hindrance to the real-time communicative activities of people. This is because the social sphere can now witness huge expansion through the openness

of the web, the ease at which online communities can search, interact and share information and resources through the web.

The relevance of McLuhan's theory to this study is the credence that the theorist led to the Internet as an ICT tool through which users can instantly source for information resources, send and receive emails as well as share resources online from anywhere in the world without fear of physical and distance hindrance.

Ranganathan propounded his Theory of Librarianship in 1931 which detailed five principles of operating a factual library system. According to the theorist,

- Books are for use,
- Every reader his/her book
- Every book its reader
- Save the time of the reader
- The library is a growing organism.

The import of Ranganathan's theory presupposes that:

- i. Library books are guides created for use rather than storage and efforts should be made to ensure that all the books in the library are therefore used.
- ii. Every library user has equal rights to get the book of his or her interest. That is, a library should serve all clientele regardless of age, sex, race or status and library staff should approach a library user with a helping hand to enable the reader to have access to his/her book.
- iii. There should be maximum use of books by their users through the provision of library catalogues and open shelves of the materials.
- iv. All library users must locate the materials that they desire easily, quickly and efficiently.
- v. The library is never static in its outlook; hence, its books, methods, staff, techniques, user, building, operation, and skills should be updated regularly at intervals (Bhatt, 2011).

The relevance of Ranganathan's theory to this study is its focus on the accessibility of readers to the library and its information resources as well as access-related issues such as the location of the library building, flexible loan policies, hours and days of operation, quality of staffing and furniture.

Objectives of the Study

The primary objective of the study was to investigate if the Internet is a substitute for a library. Specifically, the study investigated:

- i. the skills possessed by respondents to use Internet and library as information resources search tools
- ii. why respondents used Internet and Library as information search tools
- iii. the challenges faced by respondents in the process of using Internet and library as information search tools
- iv. which of the Internet and Library is the preferred choice as an information search tool?

Research Questions

The study provided answers to the following research questions:

1. which of the Internet and Library is available to respondents as an information search tool?
2. what are the skills possessed by respondents for the use of the internet and the library as information search tools?
3. why do respondents need to use internet and Library as information search tools?
4. what are the challenges facing respondents in the use of internet and library as information search tools?
5. do respondents show a preference for the internet as a substitute for a library as an information search tool?

Research Hypotheses

These researchers formulated and tested the following hypotheses to guide the study:

H₀₁: There is no significant relationship between the skills possessed by and the use of internet and library as information search tools by respondents

H₀₂: There is no significant relationship between the needs of respondents and the use of internet and library as information search tools.

H₀₃: There is no significant relationship between the challenges facing respondents and use of internet and library as information search tools.

METHODOLOGY

This is a descriptive survey study which elicited information from a randomly sampled population of 1,998 (from estimated population of 3,600) respondents in Faculties of Arts, Communication and Information Science and Education at the University of Ilorin and Kogi State University, Anyigba respectively. The researchers employed self-designed Information Search Tool Questionnaire (ISTQ) as the main instrument to obtain information from respondents in the Departments of Arabic, English and Library and Information Science in the selected universities using Convenience Sampling Technique. Copies of the questionnaire deposited with the library porters in the main library of the selected libraries were picked by respondents. The number of the completed questionnaire that was found usable for the study were as shown in the distribution that follows:

Institution	Library Science	English Studies	Arabic Studies	Total
Unilorin	333	333	333	999
K. S. U	333	333	333	999

Section A of the Questionnaire contained items of demographic information on respondents while Section B requested responses on items related to the topic of the research.

Data Analysis Technique

Data were analysed using Frequency Counts and Percentage Distribution for demographic data. Means, Standard Deviation and t-test statistic was used to answer the Research Questions and to test the Hypotheses respectively, with significant level fixed at an alpha level of 5%

Data Presentation

Table 1: Personal variables of respondents

Item	Variable	Frequency	Percentage
Gender	Male	1090	54.5
	Female	908	45.5
Field of study	English	666	33.3
	Library science	666	33.3
	Arabic	666	33.3
Age	18-30 years	1480	74.1
	31 years above	518	25.9
Category of study	undergraduate	1640	82.1
	Postgraduate	358	17.9

From the above Table 1, male respondents were in the majority (not absolute majority) with 1090 (54.5%) and female respondents were 908 (45.5%); 666 (33.3%) of respondents were in English studies, Library Science and Arabic respectively; respondents in the age range of 18-30 years were in the majority (not absolute) with 1480 (74.1%) while those above 30 years of age were 518 (25.9%); 1640 (82.1%) respondents were undergraduates and 358 (17.9%) were postgraduates.

Research Questions:

Research Question 1: Which of the search tools were available to students in the universities?

Table 2; Mean and Standard Deviation Distribution of responses on available search tools.

Item	English Studies		Library Science		Arabic	
	Mean	S D	Mean	SD	Mean	SD
Available information tools						
Internet	1.04	2.06	4.01	1.50	1.6	2.8
Google	1.02	4.01	1.48	0.03	1.3	3.8
Twitter	1.00	6.08	1.11	2.01	1.4	3.35
Library	3.01	1.02	1.06	2.54	2.8	5.40
Yahoo	1.12	6.04	1.12	2.01	1.21	4.06
	Total		8.78		8.31	
	7.19					
	Average		1.39		1.8	
					1.9	

Table 2 showed that both Library and the Internet were the most available to the respondents with a Mean of 3.0, 4.01 and 2.8 respectively

Research Question 2: what are the skills possessed by respondents to use the Internet and Library as information search tools?

Item	English		Library Science		Arabic	
	Mean	SD	Mean	SD	Mean	SD
Skills Possessed						
Accessing Document	4.09	0.34	3.03	1.24	5.1	0.14
Retrieving Documents	3.92	1.04	3.60	1.02	4.61	1.36
Locating Document	3.04	1.00	3.60	1.07	3.21	1.14
Borrowing Document	3.21	1.20	1.12	4.08	3.08	1.32
Use of References	3.46	1.13	1.03	4.02	3.29	1.21
Resource Sharing	3.36	1.15	1.15	4.04	3.25	1.98
Inter- Library access	3.03	1.04	2.04	5.0	3.02	1.65

The Table 3 revealed that both categories of respondents possessed high skill in accessing documents ($x=4.09$, $x=3.03$, $x=5.1$), retrieving documents ($x=3.92$, 3.60 , $x=4.61$), locating documents ($x=3.04$, 3.60 , $x=3.21$); English studies students were ahead in borrowing skill ($x=3.21$) followed by Arabic respondents ($x=3.08$), reference usage ($x=3.46$) followed by Arabic ($x=3.29$); resource sharing ($x=3.36$) followed by Arabic ($x=3.25$) and Inter-Library access ($x=3.03$) followed by Arabic($x=3.02$).

Research Question 3: Why do respondents need to use the Internet and Library as information search tools?

Table 4: Mean and Standard Deviation Distribution of respondents needs for Internet and Library as search tools for information.

Item	English		Library Science		Arabic	
	Mean	SD	Mean	SD	Mean	SD
Internet needs						
Retrieve documents	2.12	1.16	3.06	1.04	2.43	1.25
Read books/journals	2.08	1.20	3.01	1.01	2.23	1.01
Write assignments	1.12	1.11	3.02	1.03	2.00	1.43
Prepare for exams	2.12	1.12	3.01	1.01	2.04	1.16
Recreation	1.02	1.04	3.20	1.06	2.53	1.14
Item	English		Library Science		Arabic	
	Mean	SD	Mean	SD	Mean	SD
Library needs						
Retrieve documents	3.12	1.01	2.18	1.09	3.04	1.04
Read books/journals	3.10	1.00	2.04	1.06	3.21	1.01
Write assignments	3.04	1.03	1.11	3.02	3.02	1.02
Prepare for examinations	3.21	1.02	2.10	1.04	3.34	1.03
Recreation	3.07	1.04	1.04	2.01	3.01	1.00

As the Table 4 showed, Library Science respondents needed more of Internet skill to retrieve documents ($\bar{x} = 3.06$), write assignments ($\bar{x} = 3.02$), read books/journals ($\bar{x} = 3.01$), prepare for examinations ($\bar{x} = 3.01$) and recreation ($\bar{x} = 3.20$) than they required Library skill. The Table 4 also revealed that English, as well as Arabic studies respondents, needed more of Library skill than that of Internet to retrieve document ($\bar{x} = 3.12$; $\bar{x} = 3.04$); read books/journals ($\bar{x} = 3.10$, $\bar{x} = 3.21$); prepare for examination ($\bar{x} = 3.04$, $\bar{x} = 3.02$), write assignments ($\bar{x} = 3.21$, $\bar{x} = 3.34$) and recreation ($\bar{x} = 3.07$, $\bar{x} = 3.01$).

Research Question 4: What are the challenges facing respondents in the use of the Internet and Library as information search tools?

Table 5: Mean and Standard Deviation Distribution of responses on challenges in the use of the Internet and Library search tools.

Item	English		Library science		Arabic	
	Mean	SD	Mean	SD	Mean	SD
Internet challenges:						
Power outage	3.04	0.86	1.98	4.04	3.40	1.04
Inadequate search skills	3.16	0.90	2.03	3.91	3.31	1.20
Operating hours inadequate	3.06	1.04	2.56	1.61	3.23	1.04
Limited stock of resources	3.43	0.69	1.61	2.09	3.18	1.02
Higher search time required	3.18	1.23	1.50	2.40	3.41	1.17
Lack of index guide	3.50	1.10	1.30	3.44	3.62	1.16
Obsolete materials on the net	3.15	0.94	2.39	2.73	3.48	1.21
Retrieval of incomplete documents	3.15	1.04	1.41	1.99	3.26	1.05
Copyrights abuses	3.21	0.91	1.40	1.04	3.42	1.36
Radiation from equipment	3.06	1.13	2.99	3.49	3.18	1.02
Item	English		Library Science		Arabic	
	Mean	SD	Mean	SD	Mean	SD
Library Challenges						
Power outage	2.23	1.15	2.09	4.68	2.17	1.03
Inadequate search skills	2.04	0.99	2.43	4.53	2.23	1.25
Operating hours	2.14	1.84	2.04	3.94	2.03	1.33
Limited stock of resources	2.09	0.08	2.18	3.43	2.12	1.01
Higher search time	2.13	0.11	2.10	3.61	2.06	1.15
Lack of index guide	2.23	1.04	2.00	2.90	2.15	1.05
Obsolete materials	2.18	0.02	2.31	3.51	2.25	1.03
Retrieval of incomplete documents	2.00	0.88	2.10	2.99	2.21	1.17
Copyrights abuses	2.91	1.94	2.41	2.73	2.20	1.10
Radiation from materials	2.16	3.60	2.30	2.43	2.78	1.20

As the Table 5 showed, while English, as well as Arabic studies students, considered power outage ($x=3.04$, $x=3.40$), possessing inadequate search skills ($x=3.16$, $x=3.31$), inadequate time required to use the web facility ($x=3.06$, $x=3.23$), limited resources in internet stock ($x=3.43$, $x=3.18$), higher search skill required ($x=3.18$, $x=3.41$), lack of index guide ($x=3.50$, $x=3.62$), obsolete resources on the net ($x=3.15$, $x=3.48$), retrieval of incomplete document ($x=3.15$, $x=3.26$), prone to copyright

abuses($\bar{x}$ =3.21, $\bar{x}$ =3.42), and radiation hazards in the use of gadgets ($\bar{x}$ =3.06, $\bar{x}$ =3.18) as the challenges they faced in the use of Internet as a search tool. Library Science students did not, however, face such challenges considering the lower Mean scores obtained in the items. The table also revealed that all categories of the respondents did not encounter significant challenges while searching for information or materials in the library as evident in the low Mean scores of less than 3.00 obtained in each of the items.

Research Question 5: Which of the Library or Internet would respondents prefer to use most as a search tool?

Table 6: Mean scores and Standard Deviation Distribution of responses on the preferred search tool.

Item Preference	English		Library science		Arabic	
	Means	S D	Mean	SD	Mean	SD
Internet	3.64	0.08	3.58	1.64	3.15	0,61
Google	2.21	0.10	2.61	0.92	1.21	2.10
Twitter	1.40	1.10	1.64	2.10	1.01	1.23
Library	3.68	0.06	3.30	0.48	3.43	0.76
Yahoo	2.18	0.17	2.04	1.16	1.05	1.77

Table 6 showed that the most preferred information search tool by the three groups of respondents was the Internet ($\bar{x}$ =3.68, $\bar{x}$ =3.30, $\bar{x}$ =3.15) respectively. This is followed by Google ($\bar{x}$ =2.21, $\bar{x}$ =2.61) and Yahoo ($\bar{x}$ =2.18, $\bar{x}$ =2.04) with less than a Mean of 3.00 respectively

Testing the Hypotheses

H₀₁: There is no significant relationship between the skills possessed and the use of the Internet and Library as information search tools.

Table 7: Test of the relationship between skill and use of the Internet as Library search tools.

Variable	N	X	SD	t-cal.	t-val.	DF
Internet 1022	40	3.52	1.12	2.18	1.10	0.74
Library 976	170					

From the Table 7, the t-calculated is 2.18 which is higher than the table value of 1.10 at 0.05 alpha level of significance This showed that the difference between the skill

possessed by the respondents, Internet and Library as search tools was significant, hence, the hypothesis 1 was rejected.

H02: There is no significant relationship between respondents' needs and the use of the Internet and Library as information search tools,

Table 8: Test of the relationship between respondents needs, use of Internet and Library as search tools.

Variable	N	X	SD	t-cal.	t-val.	DF
Internet	1250	3.48	1.12	1.98	1.24	74
Library	748					

From Table 8, the t-calculated is 1.98 is higher than the t-table value of 1.24 at 0.05 alpha level of significance. This reveals that the difference in relationship between the needs of respondents to use the Internet and Library as information search tools was significant. Hence, hypothesis 2 was rejected.

H03: There is no significant relationship between the challenges faced by respondents, use of Internet and Library as information search tools.

Table 9: Test of relationship between challenges faced by respondents and the use of the Internet and Library as information search tools.

Variable	N	X	SD	t-cal	t-val.	DF
Internet	896	3.41	1.12			74
Library	1102			1.31	1.06	

Table 9 showed that the t-calculated of 1.31 is higher than the t-table value of 1.06 at 0.05 alpha level of significance. This implies that the difference between the relationship between the challenges faced by respondents in the use of the Internet and Library as information search tools was significant hence, the hypotheses 3 was rejected.

Discussion of Findings

This study revealed that both Internet and Library were available as information search tools to the respondents (table2); the respondents possessed sufficient skills to use the Internet and Library as search tools for information retrieval (table3); the respondents also needed the two search tools for information retrieval(table4); respondents in English and Arabic departments faced more challenges while using the Internet for information retrieval than Library Science respondents; however, respondents in English and Arabic

departments compared to significant challenges that Library Science respondents faced with using physical library as information search tool (table5).. This finding confirmed Herring (2001) who identified ten challenges that internet user usually faces while using the tool to retrieve information and information resources from the web; respondents preferred both Internet and Library as information search tools (table6).

There was significant relationship in the use of Internet and Library as information search tools (table7); there was significant relationship between respondents needs and the use of Internet and Library as information search tools (table 8); a significant relationship existed between respondents' challenges and use of Internet and Library as search tools(table9). The combined findings in the tables (7-9) confirmed Nwogo (2010) who asserted that in spite of glaring problems facing users of Internet and the conventional (physical) Libraries in academic institutions in our society, the two facilities are indispensable to meeting the academic, research and self-development needs of individual users and the society as a whole

CONCLUSION

Arising from the findings in this study, these researchers are, therefore, of the view that both the Internet and Library exist to complement each other as academic research and self-development information search tools. In spite of the challenges that may be inherent in both search tools, none of the facilities can serve as a substitute for another.

RECOMMENDATIONS

Based on the findings and conclusions reached in this study, these researchers recommended as follows:

Both the Internet and the Library should be seen as complementing each other when users need to locate resources and retrieve information through the two facilities.

To address the challenges raised by respondents as deterrents to effective use of the Internet and the Library as information search tools, libraries should organize user education training activities regularly to impart the necessary skills that clientele requires to make use of the search tools more effectively.

Libraries should provide environments conducive for housing Internet and Library facilities more efficiently for a long time without deterioration so that users can use the tools to maximize their search and retrieval potentials.

REFERENCES

- Adekoya, A. F. and Abari, A. (2003). Comparative analysis of the library and internet as research cinders. *Nigerian Journal of computer Literacy* 4(1) 28-44
- Ainley, J., Schulz, W and Fraillon, J. (2016) A Global measure of digital and ICT literacy Pater commissioned for the global education monitoring report 2016, education for people and planet: creating sustainable futures for all.
- Bhatt, R. K. (2011). Relevance of Ranganathan's laws of library science in library marketing. *Library philosophy and practice* 2011, 1-7
- Herring, M. Y. (2001). 10 Reasons why the internet is no substitute for a library American.
- Mbagwu F. C., Ozioko, R. E and Ogueri E. (2017). The extent of information and communication application in library and information science education in Nigerian. *International journal of library and information science*, 45-53.
- Nwagwu, W. E. (2007), "Creating science and technology information databases for developing and sustaining sub-Saharan Africa's indigenous knowledge", *Journal of Information Science*, Vol. 33 No. 6, pp. 737-751.
- Nwogo, C. E. (2010). Information communication technology: an overview. In E.C Magu and C. E Nwogo (eds). *Modern Library and information science for information professionals in Africa* Ibadan. Text links 9-32
- Ogbuiyi, S. U., Oriogu, C. D., Momoh, I. A & Ogbuiyi, D. C. (2013). Information literacy skills and awareness of electronic information resource of library users in Oyo State Public Library, Nigeria. *Information Impact: Journal of Information and Knowledge Management*, 5 (1):1-14.
- Omoniyi, J. O., Adekola, F. and Fola Adio, W. (2013). eds. *Effective communication in higher education: the use of library Ilorin GNS Division*, University of Ilorin, 1-60

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Oyinloye, A. M. (2001). Libraries: A functional approach. Lagos: Tadpole Books 113p.

Page, J. A. (1999). When disaster strikes: First steps in disaster preparedness. Serials Librarian, 3 (4), 347-361.