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Effects of Information Literacy Skills on the Use of E-Library Resources among Students of the University of Ilorin, Kwara State, Nigeria

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Introduction

The library has long been perceived as a building with walls and filled with books for reading. Issa (2003) notes that librarianship as a profession came into existence to preserve and make widely accessible the records of human experience. The emergence of Information Technology (IT) has recreated the face of librarianship. IT has permeated evenly into our daily activities. Okerulu (2003) states that IT has created limitless opportunities for open access to information. Larnikanra (2003) describes the history of the Internet which “grew out of the ARPANET, a computer network developed by the Advanced Research Project Agency (ARPA) in the 1960s.”

The term “e-library” refers to information accessed through the Internet. Unlike traditional libraries, e-libraries are not limited by location or time. Libraries have changed with the emergence and application of IT. They have assumed the role of educators, teaching users to find, evaluate, and use information both in the library and over electronic networks. As the use of e-library continues to soar, users are expected to develop information literacy skills. These skills, as Julien (2002) observes, will enable users to make efficient and effective use of information sources.

Information literacy is increasingly important. Academic libraries have responded by providing instruction in information literacy, described as “the ability to locate, manage, critically evaluate and use information for problem solving, research and decision making” (Orr, Appleton, and Wallin, 2001). In developing countries like Nigeria however, both IT and the use of the e-library are still at an embryonic stage. The limits of the tradition library and the increasing popularity of IT have caused the use of the e-

library to grow rapidly. Although people need no longer go to a building for some kinds of information, they still need help to locate the information they want.

Locating information from the e-library requires information literacy. There are standards which an information literate person must meet. The primary goal of this study is to determine how the information literacy skills, especially among students of tertiary institutions, affect the use of e-library among the [University of Ilorin](#) students.

Literature Review

The term “e-library” is used synonymously with “digital library,” “universal library”, “future library,” “virtual library,” and “library without walls.” It has been defined variously by different scholars and/or organizations, depending on their perception of the concept. Arms (2005) defines e-library as “managed collection of information, with association, services, where the information is stored in digital formats and accessible over a network.” These two definitions recognize the need for the e-library to function over a network but the crucial part of the latter is that the information is managed. MacCall, Cleveland, and Gibson (1999) define e-library as collections of electronic knowledge resources developed and maintained in order to meet the totality of information needs for a given user population. Like the traditional library, the e-library is also targeted towards a particular group of users in term of its information dissemination.

Acting as a “quality guide,” e-libraries “often follow certain guidelines for the selection of content in order to maintain a consistent collection of data” (Virtual Library 2007). They follow procedures to select the materials in their collections, to organize and make them available to users. Waters (1998) states that, “digital libraries are organizations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to the Internet, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital works so that they are readily and economically available for use by a defined community or set of communities.” The Kentuckiana Digital library (2005) points out the academic significance of the e-library, recognizing the use of appropriate technology and defining it as “an organized collection of selected digital resources created to support scholarship, research and teaching.” It states further that the use of appropriate technological standards by e-libraries will facilitate permanent access to the digital resources.

At the most basic level and central to the definitions is a collection of digital resources selected according to certain criteria and made accessible for retrieval over computer networks.

Types of E-Libraries and Resources

There are different types of e-libraries for the diverse information needs of the targeted group of users. Some are developed by groups or organizations, higher education institutions, research centers, national libraries, as well as public libraries. They include contents that are born digital and those that have been digitized (Digital Library, 2007). An e-library generally contains books, journals, opacs, webliographies (equivalent to a printed bibliography), letters, maps, dictionaries, encyclopedias, still and moving images, sound recordings, indexes, conference/seminar proceedings, theses/dissertations, abstracts and reviews, and handbooks. Traditional libraries have limited storage space, but e-libraries require very little physical space, which reduces the cost of maintaining an e-library.

Information Literacy Skills

Information literacy is rooted in the concepts of library instruction and bibliographic instruction. It is the ability “to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information” (American Library Association Presidential Committee on Information

Literacy, 1989). Thus, it is the basis for life-long learning. Julien (2002) observes that is the ability to make efficient and effective use of information sources, and that an information literate person today should possess specific online searching skills, which include the ability to select appropriate search terminology, construct a logical search strategy, and evaluate information appropriately.

Also, it entails individuals' ability to know when there is need for information, how and where to get the information and using such information effectively to accomplish a specific purpose. Shapiro and Hughes (1996) made the following major points in their definition. One, that in its narrowest sense, it includes the practical skills involved in effective use of IT and print/electronic information resources. Two, that it is a new liberal art which extends beyond technical skills and conceived as one's critical reflection on the nature of information itself, its technical infrastructure and its social, cultural and even philosophical context and impact. An information literate individual is expected to possess some qualities as observed by Association of College and Research Libraries (Information Literacy Competency Standards, 2006). These include individual ability to:

- Determine the extent of information needed.
- Access the needed information effectively and efficiently
- Evaluate information and its sources critically
- Incorporate selected information into one's knowledge base
- Use information effectively to accomplish a specific purpose.
- Understand the economic, legal and social issues surrounding the use of information and access and use information ethically and legally.

Corroborating ACRL's observation, Wikipedia ("Information Literacy" 2007) states that an information literate person is one who:

- recognizes that accurate and complete information is the basis for intelligent decision making.
- recognizes the need for information
- knows how to locate needed information
- formulates questions based on information needs
- identifies potential sources of information
- develops successful search strategies
- accesses sources of information including computer based and other technologies
- evaluate information no matter what the source
- organizes information for practical application
- integrates new information into an existing body of knowledge
- uses information in critical thinking and problem solving (Doyle,1992)
- uses information ethically and legally

September (1993) asserts that students need some level of these skills to make decisions about academic matters and other aspects of their daily lives. Julien (2002) identifies the skill domains that are involved and classifies them as cognitive, affective, and physical, i.e., thought, attitude, and operation.

Information Literacy Skills and Higher Education

Information literacy instruction can be formal or informal. Formal instruction can include for-credit courses and both distance and face-to-face. Informal instruction includes tutorials and online instruction. To be successful, information literacy depends on collaboration between classroom faculty, academic administrators, librarians and other information professionals. Yeboah (1999) describes how librarians in the University of Botswana collaborated with lecturers in the Biological Science Department and planned the syllabus, timetable, and logistics for making courses on information literacy skills for 3rd and 4th year students.

Problem Statement

Students need information for a variety of activities and the e-library has vast electronic resources that can meet any of these purposes. There is a daily explosion of information resources and the challenge of using these resources effectively and responsibly. In using the e-library resources, students lack skill in locating and evaluating information, which impedes its effective use. This research investigates the lack of information literacy skills and how it affects the effective use of e-library resources among students of the University of Ilorin, Ilorin, Kwara State, Nigeria.

Research Questions

- What e-library resources are available at the University of Ilorin Library?
- How are students' information literacy skills assessed?
- How does the information literacy skills' acquisition affect the use of e-library resources?
- What information literacy courses are offered to University of Ilorin students?
- What problems are encountered in teaching information literacy skills to students?
- What problems does the library encounter in acquiring e-library resources?

Methodology

This research uses a survey. Its population includes all active users of the University of Ilorin Library, who are registered undergraduates and postgraduates, a total of 415 at the time of data collection. From this number, a total of 72 were sampled, representing 17.35 percent. The convenience sampling technique was adopted for administering the questionnaire to the students that were present in the library at the time of data collection. Two library employees were selected to be part of the sample, to collect other relevant data that students may not have knowledge of. The study sample from the population was considered justifiable against the backdrop of the position of Edem (2005), who refers to Krejcie and Morgan's sampling formula, which suggests "a sample size of 384 will be sufficient for a population of 100,000; 370 for 10,000 and 248 for 700". Similarly, Ali and Denga (1989), while accepting that there is no universal rule for determining the appropriateness of sample sizes, state that a sample should be about 15-30 percent of the population.

A questionnaire was the major instrument for data collection, complemented by the interview for the two library staff. The questionnaire has three sections: personal data, use of e-library (8 questions), and information literary skills (10 questions). Two research assistants were used and the data collected were descriptively analyzed using the frequency tables.

Data Presentation and Analysis

Table 1: Awareness and Use of E-library

Variables	Respondents	%
Aware and use	25	34.72
Aware but not use	44	61.11
Not aware	3	4.17
Total	72	100

Only slightly more than one third of respondents are aware of and use the e-library facilities.

Table 2: Students Experience while Using the E-library

Experience	Respondents	%
Whenever I use the e-library, I find what I want	5	6.94
I find it difficult to locate the information	2	2.78
I usually find what I want but with frustration	19	26.39
Avoiding e-library because I can't use it	38	52.78
Out of reach, power failure no enough time	2	2.78

N = 72

Table 2 shows that more than half the respondents avoid using the e-library due to their inability to use e-resources.

Table 3: Uses of Computer

Uses	Respondents	%
E-mail/chart/instant messaging	46	63.89
Word processing/spreadsheets	12	2.78
Interest/www	55	76.39
Searching databases	18	25
Games/Entertainment	32	44.44

N = 72

Only 25 percent of respondents use the computers for searching education-related databases. However, a high number are comfortable seeking information through Internet searching.

Table 4: E-library Instruction

Variables	0 times	1-2 times	3-4	5-6	7+
			times	times	Times
Online orientation	58	4	2	0	0
E-library instructions as part of a class	55	8	0	0	0
One-on-one instruction with librarian	44	19	0	1	0
E-library instruction course	58	6	0	0	0
Self-guided orientation	40	17	8	0	0

N = 72

A majority of respondents had no previous library instruction.

Table 5: Level of Information Literacy Skills

KEY: VC=Very Comfortable C= Comfortable U=Undecided UN=Uncomfortable

VUC=Very Uncomfortable

Variables	VC	C	U	UN	VUC
Formulating questions based on information needs	53	16	2	1	0
Identifying potential sources of information	23	43	4	2	0
Developing successful search strategies	20	45	3	4	0
Accessing sources of information	5	27	35	5	0
Evaluating information	50	20	0	1	0
Organizing information for practical application	8	54	8	2	0
Integrating new information into an existing body of knowledge	17	49	5	1	0
Using information in critical thinking and problem solving	18	51	3	0	0

N = 72

Most respondents claimed comfort with various information literacy skills, especially formulating questions based on information needs and organizing information for practical application.

Table 6: Lecturers' Efforts on Developing Students Information Literacy Skills

Variables	Respondents	%
Refereeing students to libraries	8	11.11
Encouraging students to see the library	46	63.89
Giving assignments to use e-library	94	75
Taking the class to the library for orientation	12	16.67
None of the above	5	6.94

N = 72

Three quarters of those surveyed said that the lecturers give assignments requiring the use of e-library, while more than three-fifths claimed that they are usually encouraged to see the librarians for advice and instruction.

Table 7: E – library and Information literacy courses offered

Causes	Respondents	%
Use of library	58	80.56
Research methodology	22	30.56
Use of computer	62	86.11
Use of Internet/www	0	0
Communication skills	57	79.17
None	0	0

N=72

Most respondents showed awareness of e-library and information literacy courses being offered.

Table 8: Search Techniques frequently used

KEY: VF=Very Frequently, F= Frequently, O=Occasionally, NF=Not Frequently, N=Never

Variables	VF	F	O	NF	N
Boolean operators "AND"	12	42	4	3	11
Boolean operator "OR"	3	41	8	8	12
Boolean operator "NOT"	1	8	13	5	45
Proximity operator "NEAR", "BETWEEN"	0	2	14	46	10
Limiters	0	3	2	2	55
Truncation (# or \$)	0	1	2	1	57

N=72

Most respondents used the Boolean operators AND and OR, while they are less familiar with limiters and truncators.

Table 9: Evaluation of the information located

KEY: VF=Very Frequently, F= Frequently, O=Occasionally, NF=Not Frequently, N=Never

Variables	VF	F	O	NF	N
Read text and select main ideas	31	36	1	0	4
Compare information from various sources	21	47	1	0	3
Investigate various view points of the literature	9	15	1	11	36
Using information techniques for studying	6	7	5	15	29
Identifying verbatim information for later quoting	34	16	3	7	3

N=72

More than 40 percent of respondents read through information to select main ideas, while another 30 percent compare information from different sources to determine reliability, accuracy, timeliness or bias of such information.

Interview with Library staff

The interview conducted with two library staff showed that the library has electronic resources, including CD-ROMs and databases on various subjects and disciplines from which students can search and access information. The library also has limited Internet facilities for the users, with efforts underway

to expand. The library is aware of information literacy standards for higher education and they are being implemented. Only librarians are involved in teaching information literacy skills. In its teaching, the university has problems, including overcrowding and lack of adequate teaching facilities. Also, most students do not have prior knowledge of IT, which sometimes makes it difficult for them to understand that aspect of information literacy instruction. Information Literacy is taught as a part of GNS 111 (General Studies), a course offered to first-year students.

Findings

The study reveals that the University of Ilorin Library has provisions for students to use e-library resources. There is a computer section with Internet connectivity for accessing the resources. Most students are aware of the e-library resources but do not use them because they lack the skills. They have not been formally taught the use of e-library resources. Teaching of information literacy is an embedded course, an aspect of "General Studies" (GNS 111). Only the librarians are responsible for teaching information literacy contents in the Institution. Yeboah (1999) and American Library Association (2005) see the ideal as a collaborative effort between faculty members, librarians, and academic administrators.

The school has yet to offer information literacy instructions via the Internet as Bawden, Devon, and Sinclair (2000) suggest. Juxtaposing this study's outcomes with ACRL standards reveals that students have not yet met these standards. The university does not have a specific information literacy standard for its students, and most of them do not use IT in accessing information as stressed under ACRL Standard 2.3, 2.5.1, and 2.5.5. However, a majority of the students had the understanding of evaluating information as contained in Standard 3, although as mentioned earlier, lack of adequate IT skills prevents them from using computers in the process.

On turning information accessed to products and/or performance (Standard 4), a majority of the respondents are already doing this, especially when writing research reports. Most of them also agree that IT is relevant to their information products and performance just as many desired to learn more about e-library and information literacy skills.

Conclusions

It is concluded that information literacy skills have not taken the desired firm root among University of Ilorin students. The little that is presently being taught involves mainly the librarians without the partnership of the faculty members and the librarians. This problem, coupled with inadequate teaching aids, affects the students' acquisitions of the skills. However, the students have acquired a certain level of information literacy, including technological skills as well as the investigative and critical thinking.

Recommendations

The University of Ilorin Management should adopt one of the information literacy competency standards available to be used in the institution and make such available to each course instructor while the necessity for achieving the standards should be stressed. To implement these fully, the university should review its mission and educational goals to determine how information literacy would improve learning and enhance effectiveness. It should also embark on faculty and staff development programmes for the acceptance of the implementation of the standards. It should stress the need for faculty members to join the librarians in teaching information literacy skills to the students. The participation of lecturers in the programme would ensure effectiveness and smooth implementation.

Various methods should be developed for teaching and assessing the information literacy skills of the students, which may include: one-on-one instruction, interactive classes, online tutorials, as well as building assignments around research situations. Lecturers must also include the use of the e-library

resources and computers as well as the Internet and online searching skills. Students should be encouraged to learn more about electronic libraries and information literacy.

The university library should urgently develop its e-library project by procuring all necessary facilities and also open the planned Internet café for students to access the e-library and make effective use of its resources.

Students, faculty, and librarians should learn more about e-libraries and information literacy, by visiting sites such as www.ala.org, www.acrl.org, www.infolit.org and many more. They can also search using any of the search engines available for journals or proceedings that discuss the programmes.

Curricula should be revised at the national level to accommodate the integration of information literacy and the use of e-library, either as embedded or standalone courses. This is in recognition of the changes in technology, especially in managing information.

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