
Internet Resources and Effective Library Services

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ABSTRACT

This study was to assess the internet resources and effective library services. The internet is a worldwide system of interconnected computer networks. The internet consists of a large number of linked computer networks forming a global network. It is largely open and free, allowing users to communicate with each other for work and recreational purposes, as well as for corporate and personal reasons. Libraries worldwide now invest a lot in internet access because it reduces the time between the production and utilization of information, improves cooperation and exchange of ideas with fellow researchers in other institutions, regions, or countries, furthers the sharing of information, and promotes multidisciplinary substitutes for expensive hardcopy libraries by providing students with access to scholarly information resources. The study concluded that the use of internet resources implies the extent to which library users make effective use of the internet resources and library services in a specified period. Internet resources and library service have been a concern since the time libraries changed from being cultural monuments to becoming knowledge acquisition and information communication centers. Librarians came up with the idea of educating library users on how to find and locate the information they need for their day-to-day activities. One of the recommendations made was that internet resources should be provided in libraries to improve effective library services since the need for connectivity can no longer be ignored in this era of information and communication technology.

KEYWORDS: Internet, Resources, Effective, Library and Services

Introduction

The internet is a worldwide system of interconnected computer networks. Computers and computer networks exchange information using TCP/IP (Transmission Control Protocol/Internet Protocol) to communicate with each other. The computers are connected via telecommunications networks, and the internet can be used for e-mailing, transferring files, and accessing information on the World Wide Web. Anderson & Reed (1998) noted that the internet technology and computers have made it possible for students to be active learners and have allowed instructors to be facilitators. Jackson (2011) remarked that the internet will level the educational playing field due to its availability to everyone, everywhere and any time, irrespective of gender, race/ethnicity, income or other socio-demographic characteristics. Thus, the internet is a vital tool that will propel university education to greater heights as the world moves further into the knowledge-based economy.

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ideas with fellow researchers in other institutions, regions, or countries, furthers the sharing of information, and promotes multidisciplinary substitutes for expensive hardcopy libraries by providing students with access to scholarly information resources. According to the Library Association (1995) p.546, the internet consists of a large number of linked computer networks forming a global network. It is largely open and free, allowing users to communicate with each other for work and recreational purposes, as well as for corporate and personal reasons. Because the internet is so vast and is without regulation or hierarchy, the network is an accumulation of information from many sources. Resources are available in all subjects, mailing is possible for all the participants, documents can be forwarded and delivered across the world and directories and journals abound.

Electronic mail is a paperless method of sending messages, notes, or letters from one person to another, or even many people at the same time via the internet. E-mail is very fast compared to normal mail; electronic mail messages usually take a few seconds to arrive at their destination. One can send messages anytime of the day or night and it will get delivered immediately. You do not need to wait for the post office to open, and you don't have to worry about holidays. It works 24 hours a day and seven days a week. Electronic mail is information stored on a computer that is exchanged between two users over telecommunication. More plainly, e-mail is a message that may contain text, files, images or other attachments sent through a network to a specified individual or group of individuals.

Ray Tomlinson is credited as the inventor of email; in 1971, he developed the first system to send mail between users on different hosts across the ARPANET, using the @ sign to link the username with a destination server. By the mid-1970s, it was formally recognized as email. Juimba (2000) in his study submitted that e-mail is the most commonly used application of the internet and it has become a standard practice in the scientific community to have an email address. Email allows two or more people to communicate with one another, collaborate on research, and share experiment results with a wide range of interactive people from their computer sets. The author stated that it is possible for all these to happen within minutes, thus email has removed the need for postal facilities in communications. What is more, the copy of the message sent will be available whenever you want to look at it, even in the middle of the night. The biggest advantage of using email is that it is cheap, especially when sending messages to other states or countries, and at the same time, it can be delivered to a number of people around the world.

The Benefit of Email to User is that:

1. It enables user to save and keep record of communication
2. It is more personal and direct within seconds around the world
3. Easy to send with no time boundary
4. Messages are delivered within seconds around the world
5. You may attach files, documents, images and other media to an email
7. Good example of one-to-many communication
8. Activate your filter and receive only genuine mails
9. One to access the email from anywhere with internet connection being on

The World Wide Web is a collection of related web pages, including multi-media content, typically identified by a common domain name and published on at least one web server. The World Wide Web (WWW) is an information system where documents and other web resources are identified by Uniform Resource Locators (URLs), which may be interlinked by hyperlinks and are accessible over the internet. According to Heimlich (2003), the World

Wide Web is used for various activities like web searching, finding resources, and e-mailing. Furthermore, the author consented that those who use the web at home for work report a greater use of the internet for a variety of tasks rather than those who use electronic sources and/or the internet achieve the greater scholarly productivity. It has been found that there is a positive relationship between the frequency of use of technology and publication.

Social media is a means of interaction among people of different ages in which they create, share, and exchange information and ideas in a virtual community of networks. Kaplan and Haenlein (2010) defined social media as a group of internet-based applications that build on the ideological and technological foundations of Web 2.0. They allow the creation and exchange of user-generated content and depend on mobile and web-based technologies to create highly interactive platforms through which individuals and communities share, create, discuss, and modify user-generated content. Social media is playing an important role in today's online world. The way of meeting people traditionally is long gone as they now meet on social media websites. It is an instrument of communication that gives information and also interacts with its users while giving the information. Social media is a powerful new form of communication, and its use cuts across rank, profession, age, etc.

Online databases are the most effective way to provide access to electronic books and journals in libraries; they are through subscription to online databases which can be accessed through the internet. Online databases are a collection of electronic information sources (e-journals and e-books) by publishers from various fields and disciplines (Afolabi 2007). Some of these databases are provided free of charge to libraries in developing countries by their publishers or vendors. Some of these include the National Agricultural Research Institute (NARI) and Access to Global Research in Agriculture (AGORA). Others require subscription fees, such as the Emerald Database and others. Access to these databases provides researchers and students with thousands of scholarly articles in their fields of specialization or research (Fatoki, 2004). For students to utilize the growing range of electronic resources, they must acquire and practice the skills necessary to exploit them (Okeilo & Obura 2010).

Use of electronic resources implies the extent to which library users make effective use of the library's electronic resources and services in a specified period. Use of library and information resources and services has been a concern from the time libraries changed from being cultural monuments to knowledge acquisition and information communication centers. In light of these developments, librarians devised the concept of educating library users on how to find and locate information for their day-to-day activities. Effective use of electronic resources is possible if the processes of accessibility are cheap, unambiguous, relevant, nearer to people and in line with their level of sophistication, literacy and understanding.

Therefore, the ultimate purpose of using information is to satisfy the information needs of the user. Because users' needs are varied, their satisfaction amounts to a high level of achievement. In order for the use of electronic information resources to be effective, there is a strong need to create awareness among potential library users through acquisitions and the setting up of internet services in public libraries.

Literature Review

This chapter reviews related literature on internet services and students' use of electronic resources in public libraries. The review is presented under the following sub-headings: theoretical framework, conceptual framework, review of related empirical studies and summary of literature reviewed.

Theoretical Framework

The study adopted Davis, F. D. (1989) Technology Acceptance Theory (TAT) and Orr Theory of Utilization (1973). Technology Acceptance Theory is used to support the independent variable (internet service), while Orr’s Theory of Utilization supports the dependent variable.

Technology Acceptance Theory (TAT) Davis F. D. (1989)

The Technology Acceptance Theory (TAT) was developed by Davis, F. D. in 1989. TAT provides an explanation of the determinants of technology acceptance that is generally capable of explaining users’ behavior. It explains the attitudinal, social and control factors that affect Information Technology (IT) usage. The theory proposes that usage of an information system is determined by a user’s intention, which in turn is determined by the user’s beliefs about the system. Two kinds of important beliefs are involved in TAT; perceived usefulness and perceived ease of use of the system. Perceived usefulness is defined as the extent to which a person believes that using the system will enhance his job performance. Perceived ease of use is defined as the extent to which a person believes that using a system will be free of effort.

Although perceived usefulness has a direct effect on adoption intention, this theory also explains that usefulness and perceived ease of use will have a significant impact on users’ attitude towards the use of the system which may be feelings of favorableness or unfavourableness towards the system. A user who does not see the usefulness of electronic resources or sees the use of computer technology as a very difficult task will manifest a negative attitude towards the use of internet service when seeking information for research work. Similarly, a user who has computer self-efficacy will also not perceive the use of the e-resource as easy since its use entails manipulating the computer.

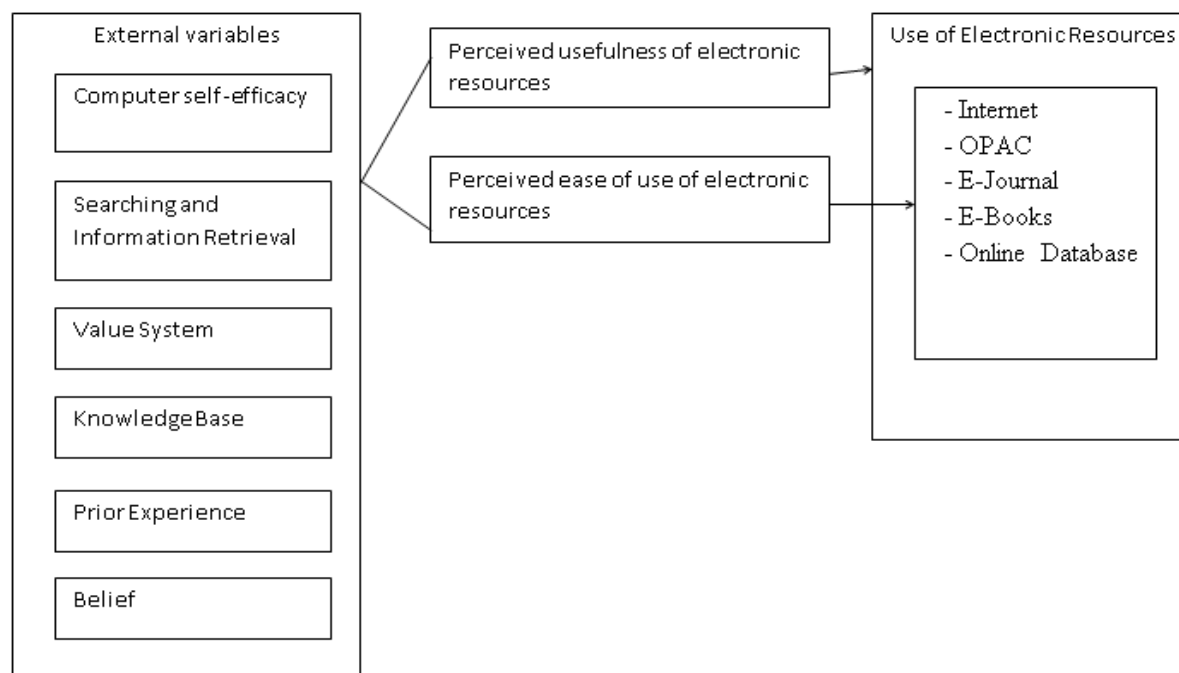


Fig. 1: Technology Acceptance Theory Davis (1989)

The relevance of Technology Acceptance Theory (TAT) in this study is that the theory explains how attitudinal, social, and control factors such as perceived usefulness and perceived ease of the system affect the internet and the use of electronic resources. The relevance of this theory to this study is based on two of its elements: perceived usefulness and perceived ease of use. The acceptance and use of internet services by users in public libraries in the United States of America is predicated on these two elements: perceived usefulness and perceived ease of use. Users such as students will be disposed to use internet services if the services are useful to their academic engagement and help them with their assignments and projects. On the other hand, since internet services are ICT enabled, users will be disposed to use them if the technology is easy to use and user-friendly.

Orr’s Theory of Utilization

The Theory of Library Goodness, as propounded by Orr in 1973, was designed to test the assumed relationship among library resources, capability, utilization, and the beneficial effect of library services in which an increase in one is expected to lead to an increase in each of the succeeding measures, though not necessarily proportionate. It is assumed that the quality of library service is a function of the availability of resources, capability, utilization, and beneficial effects.

Orr’s theory is illustrated below;

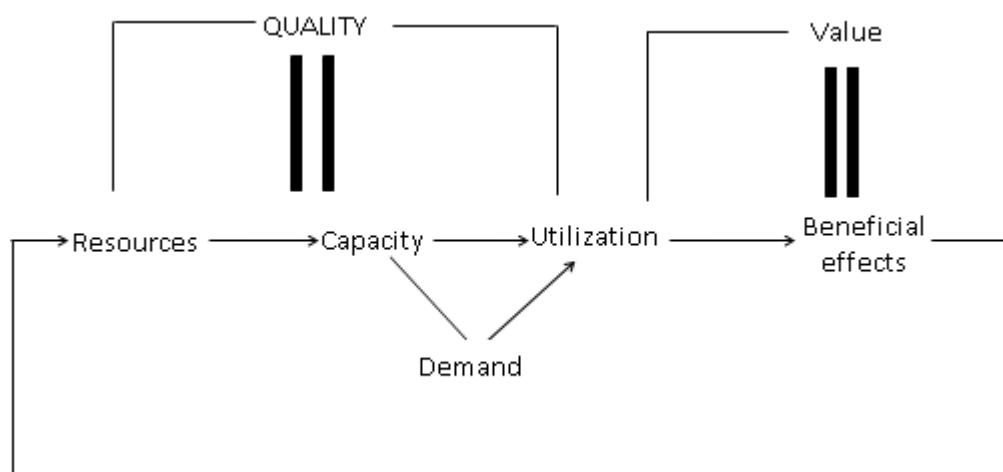


Fig. 2: Library Goodness Diagram

Source: Orr, R. H. (1973)

Orr's theory proposes that the utilization of the library is highly premised on the capacity of the resources to engender the benefit. It proposes two elements of quality and value. This proposition of quality predicts that information resources are good in terms of quality if they meet the needs of their users. In the absence of utilization of library resources, it will be difficult to measure the quality of library resources. Use (benefits) can only increase when information resources are provided, made available and utilized by the users. There is the assumption that information resources' availability will increase use (benefits).

The basic elements of the theory that relate to this study can be found in the following:

Resources: These are simply information materials that are made available in the library for the use of the library patron. This includes journals which constitute an important information material.

Use: This simply means the use of information resources. It combines the elements of resources and capability. Journals are an information resource must have the capability to effect utilization based on the quality and value of their contents.

Capability: In line with the elements of this theory capability, simply lies in the content of information resources that must be of value and quality to be able to make a meaningful impact on the users.

Benefit: Benefit here means the quality of researches that can be produced with the use of information resources that has quality and value. The use of journals has the ability to assist students in their research and scholarly activity thus raising a generation that is intellectually developed and equipped.

The relevance of this theory to the study is that the utilization of internet services provided by public libraries in the United States of America is based on the capacity of the resources to engender benefits. This benefit is premised on the quality and value of electronic resources. Internet services have the capacity to engender utilization if they are of quality and value, thus leading to benefits in terms of the quality of research production and intellectual development of the user. It proposes that the utilization of library resources be premised on the quality of those resources. Public libraries in the United States of America cannot be said to be living up to their expectations if internet services lack the capacity to engender utilization of their resources, which will in turn benefit the community of users.

Conceptual Framework

The Internet has become the most popular medium of communication and the basis for personal, economic, and political advancement in today's society. It is an efficient tool for finding the latest news, views, events, browsing library catalogues, indexes, abstracts, exchanging information with colleagues and intellectuals, and joining in lively debates or financial and business transactions instantly.

According to Sawyer and Williams (2003), the internet is a worldwide network that connects hundreds or thousands of smaller networks. These networks, according to the author, link educational, commercial, non-profit, and military establishments and even individuals. Moreover, Ojedokun (2001) described the internet as an information super highway, which is simply an international network of computers that provides a wide range of information in all facets of human endeavours to end-users. Afolabi (2001) observed that the internet can be used for research by browsing the web to access databases provided electronically.

The author further stated that with the help of the internet, e-mail can be sent and received; chat and discussion groups can be conducted using the internet. Furthermore, studies by Ojedokun (2001) revealed that the internet has many benefits in the academic cycle. These include the provision of access to a wide variety of information sources globally and the ability to discuss and share experience with colleagues. To be able to derive maximum benefit from the internet, Ozroko (2005) and Nwachuku (2005) advise that end users must possess some skills. Ojedokun (2001) also confirms this, as he discovered that students at the University of Botswana lacked skills and this greatly impeded their meaningful exploration of the internet. In addition, Daniel (2000) opined that the internet makes possible worldwide accessibility to a wide range of information resources, including publishers' catalogues, dictionaries, database library catalogues, public information and listings, travel timetables,

maps, and other reference sources. The author further stated that the internet has become the magic tool in the hands of reference librarians to promptly resolve users' queries and puzzles.

E-mail and use of Internet services

E-mail is a way of sending messages to library users. It is a method of composing, sending, storing and receiving messages over the electronic communication systems. Users receive continuous updates through e-mail on their areas of research interest directly from the internet. With the internet, through e-mail, one can access a wide variety of different discussion groups and social networking sources. As soon as the information hits your e-mail address, an alert will be given to notify you of the mail, especially when you have e-Alert and RSS feeds. The concept of electronic mail is fairly straightforward. Electronic mail systems allow the creation and transmission of messages which can be addressed to individuals or select groups of individuals. The recipient can then read the message, answer it, store it electronically, forward it to another individual, print a paper copy, or delete it. However, the technology and variety of types and levels of electronic messaging is much more complex. For background information, consider Trudell et al (2008) who present historical and technical aspects of electronic mail. Trudell et al also identify speed of delivery, security, reliability of delivery and privacy of messages as three beneficial characteristics of electronic mail. Universal delivery and flexibility continue to present problems in the use of electronic mail. Additional benefits of electronic communication include the extension of the potential work day since electronic mail can be sent and received virtually any hour of the day; the use of more concise, written communications which take advantage of the fact that people read about six times faster than they talk, and the decrease in interruptions by incoming telephone calls. The classic benefit of electronic mail, however, is the elimination of "telephone tag" and the frustration of not being able to reach the person one needs to talk to.

Electronic mail serves as a good research tool because of its speed. Messages sent are delivered immediately. This facilitates teaching and learning through the scholarly discussion group. According to Mehta and Sivadas (2005), there have been tentative moves towards using email as a research tool, primarily in the form of quantitative methods such as electronic interview and electronic focus groups. The use of email as a research tool is ideal as it is friendly to the respondents. Thach (2006) says that subjects are not constrained to synchronous communication but can respond when and how they feel comfortable. It also facilitates collaborative research as researchers can communicate without the cost of travel. It enables library users to patronize digital resources in the form of text, images, audio or video. Libraries in the 21st century now use electronic bulletin boards for communication with their patrons. Electronic bulletin boards allow users to send messages and receive answers from other users.

World Wide Web and Use of Internet Services

The World Wide Web is one of the widely used internet services. Specialized software called a web browser is needed to make use of the sites' features. Websites are files made up of groups of pages designed and set up by companies or individuals who wish to communicate with internet users throughout the world. Each website has its own unique address, which is called a Uniform Resource Locator (URL). Kreyche (1998) explains that the world wide web is a system of hyperlinked documents allowing graphical access to the internet and containing a wide variety of multimedia webpages. The use of the world wide web in the library has benefits such as enabling students' use of electronic resources by providing hypertext links between documents which students navigate to retrieve information. It also offers flexibility

regarding where and when information can be accessed, unlike print-print library collections, which are used in specific places. However, Kibbee (1996), states that the world wide web has pitfalls which include; lack of authority for materials which leads to grammatical errors and misspelling found in web documents, inability to locate quality materials due to enormous publishing of low quality resources on the web, etc.

Nowadays, libraries are using the web environment to provide high quality information for their users, mostly in digital format, but their most important role lies in numerous and enriched library services. The internet and web technologies create a new and unprecedented environment for governments, businesses, educational institutions, and individuals, enabling them to webcast any information using multimedia tools. The World Wide Web (WWW) can provide information about anything, anyone and anywhere. It seems that everyone is on the WWW, especially information sources and resource providers. It has also changed the concepts of "time-honoured" and scholarly visits to physical libraries, with desktop access to library resources and services available virtually. Libraries have always tried to use the most recent available technologies for information collection and preservation, and have adopted web sites in this era of technology boom. Links can transform a website into "a house in which every single window is also a door. The development of library websites started in the 1990s. As soon as Mosaic, the world's first web browser, was released in 1993, academic health science libraries began developing websites (Brower, 2004). The development of the library website at the University of Nevada-Las Vegas (UNLV) Libraries, which became operational in 1996. Today, very few libraries are without a presence on the web. As the number of library websites grew, it was necessary to evaluate them.

The designing of a library website is an evolutionary process. As good design principles continue to evolve, so too should library websites and website evaluations be incorporated into general web management principles. Ward and Mervar stated that a library's website is a powerful gateway that can provide information to patrons, but often users access Google or other sources for information even though library websites provide more authentic, reliable and organized information and internet sources than the general internet. Previous analyses of library website content have viewed a number of factors related to navigation, access, speed, general library information, collection, catalogue access, electronic resources, mission statement and other interactive services such as RSS feeds and chat with a library.

Online Database and Use of Internet

An online database is a machine-readable file of organized information with which the user interacts by means of a terminal connected to the computer housing the file. The terminal may be wired directly to the computer or it may communicate with it via a telecommunication network. Online databases consist of published journals, reports, books, image collections, magazines etc. It enables students to retrieve electronic resources for research, term papers, assignments, etc. Despite the information explosion, the increase in cost and availability of scholarly information in digital format has been a problem. Abdulmumin (2010) says this is the reason libraries are engaging themselves in formal associations or joint ventures, often referred to as consortiums. This enables resource sharing among libraries. As Olorunsola (2011) noted, organizations such as the United Nations (UN) provide free access or discounted access to journals and databases through programs like Access Global Online Research in Agriculture (AGORA), Electronic Information for Libraries Network (EIFL.NET), Health Internetwork Access to Research Initiative

(HINARY), etc. Also, the government has subsidized the cost of EBSCO Host, an online research database. This enables the library to afford subscriptions to more databases.

Students and instructors in higher education are expected to retrieve, use and apply information in their chosen field of study. In today's technology, rich education environment, much of this information is found in or with the help of web-based indexes and databases. General subject databases that provide access to articles in magazines, newspapers and journals such as Wilson Omni File and Readers Guide, Ebscohost's Academic Search and Master FILE and ProQuest's Newspapers have become the bread and butter of lower-level undergraduate research. Subject-specific online indexes, which have largely replaced their paper-based predecessors, are bibliographic tools essential for higher-level course work and faculty research. (For convenience, the term "databases" will be used in this article in its broadest sense, referring to both indexes and full-text databases.) These are large collections of machine-readable data that are maintained by commercial agencies and are accessed through communication lines. Many libraries subscribe to them for easy access and use of current information. The disadvantage is that only bibliographic data is presented and not full text. The information cannot be accessed when the system is down for any reason. For example, Compendex, SciFinder Scholar, Web of Science and Current Contents, Olorunsola (2011).

Social Media Services and Use of Internet

Studies concerning the possibilities and challenges of Web 2.0 in libraries have received considerable interest from scholars and practitioners. Earlier research on social media and academic libraries focused on the ability of libraries to market and promote services, to remain relevant to younger generations, and to achieve a new level of interactivity between library personnel, current and prospective users.

Within the existing literature, early social media tools, such as blogs and wikis, have been viewed as ideal sources to disseminate news and information Scale and Quan-Hasse (2012). For example, Cooper and May (2009) described the implementation of a blog at a small academic library in Alabama as an important tool in reaching out to students, regardless of their involvement on campus and previous experience with the library. Lani Draper and Turnages (2008) survey of 265 academic librarians found that blogs were used overwhelmingly to market the library's services, while Belden (2008) observed that external sites, such as Wikipedia and My space, were effective at promoting the digital collections of a small academic library in Texas, Web 2.0 and social media applications have also been highly valued for their ability to connect libraries with users who may be unaware of existing resources and services. Sadeh (2007) argued that implementing a social media presence is fundamental to remain pertinent and to meet user expectations, particularly with younger populations. Brian Mathews (2006) suggested that libraries can create services that are more responsive and attuned to the changing needs of users. This is especially relevant in the context of the 21st century learner. Trilling and Fadel (2009) described the framework for 21st century learning as integrating three central skills; life and career, learning and innovation and information and media technology. Studies by Linh (2008); Xu, Ouyan and Chu (2009), Barhanna, Secholzer, and Salem (2009); and Kim and Abbas (2010) all suggested that libraries take for granted the level of technological understanding and sophistication of their users, specifically those who are classified as Millennials or Generation Y. These groups may use these tools primarily for social purposes and entertainment, but may be less familiar with information-seeking skills on the web or the

methods for using and assessing digital resources. Additionally, both Xu and colleagues (2009) and Kim and Abbas (2010) found that librarians were often more familiar with social media applications than students. This is relevant considering that for students, social media are likely perceived as personal social tools primarily used for interaction between peers, rather than as conduits for accessing and connecting with library resources and service.

Review of Related Empirical Studies

Kumah's (2015) study on the use of email and library services by graduate students at the University of Ghana revealed that graduates make use of email more in libraries. The main objective of the study was to investigate the extent to which graduate students use the library and email. The comparative research design was used to compare library and email use. The study statistics showed that 18 (10.9%) graduate students make use of email only, while 11 (6.78%) of the students make use of the library only. Meanwhile, 119 (72.1%) of graduate students make use of both the library and email. The study further revealed that email was the most preferred source of information.

Muhammad (2013) conducted a study on the use of universities' libraries. *The World Wide Web in Pakistan: An Evaluation*. This study presents findings from a user-based evaluation of the use of Pakistani universities' library websites. A questionnaire (printed and electronic) was used to collect the data from 17 universities. A purposive sample of 60 users from each university was drawn based on their academic role differences (undergraduates, graduates, researchers, and faculty). The findings of the study show that the use of university websites in Pakistan was satisfactory. Patrons who frequently used the internet and the library were found to be frequent users of the library's websites. University websites were found to be vital sources of awareness about the presence of the library websites and computers physically available at the university libraries were the significant places to use the library websites. Regarding users' academic role difference, faculty connected to the library websites from departments/faculties, while researchers and students preferred to use them from university libraries. The library websites were mainly used to find course-related materials or to search for items in the online public access catalogue (OPAC). However, on the basis of users' academic roles, faculty used the library websites to search in the Higher Education Communication (HEC) Digital Library offering international scholarly literature; researchers accessed them to search in OPAC; while students preferred them to find course-related materials. The study recommends creating dynamic websites in all university libraries in Pakistan with useful content and state-of-the-art services for wider use.

In a study conducted by Quadri and Idowu (2016) on social media use by librarians for information dissemination in three Federal University Libraries. The general objective of the study was to find out the level of awareness of social media among librarians at the federal university. A descriptive survey was adopted for the study, while the sample consisted of all 82 librarians in the selected university libraries. A questionnaire was the instrument used for data collection, while the data collected was analyzed through the use of mean and standard deviation. The study established that there was a high level of awareness of social media tools like Facebook, Google+, Twitter, LinkedIn, Academia.edu, but Facebook, Google+ and Twitter were mostly used for disseminating information in libraries. Based on the findings, the study recommended that there is a need for more awareness programs in the form of conferences, workshops, and training sessions for librarians to stimulate new ideas and sensitize them to the great potential of social media tools.

In another study conducted by Larson (2017) on Faculty Awareness and use of Library subscribed Online Databases in the University of Education, Winneba, Ghana: A survey. This study was carried out to examine the usage of online databases by faculty members of the University of Education, Winneba. Four research questions were formulated to guide the study. The study design questionnaire was used to elicit data from the respondents. The data was analyzed using frequencies and simple percentages. The results of the study revealed that the majority of respondents were aware of the databases, though there were a few of them who did not know the existence of the databases. It further established that a number of faculty members who utilize the databases have knowledge of some of the databases and use them mainly for research and other educational activities. However, the results indicated that though faculty acknowledge the importance of the databases to their information needs, there were few hindrances that inhibited their effective use of the databases. These were: no access to the databases outside the campus, passwords to some databases not functioning, and issues with internet connectivity. The paper ends with recommendations to ensure effective and efficient use of the databases.

Conclusion

The study concluded that the use of internet resources implies the extent to which library users make effective use of the internet resources and library services in a specified period. Internet resources and library service have been a concern since the time libraries changed from being cultural monuments to becoming knowledge acquisition and information communication centers. Librarians came up with the idea of educating library users on how to find and locate the information they need for their day-to-day activities.

Recommendations

1. Internet resources should be provided in libraries to improve effective library services since the need for connectivity can no longer be ignored in this era of information and communication technology.
2. The government should make sure that adequate facilities are provided that can enhance effective library service delivery in schools.
3. The government should improve internet resources in the library to make it possible for students to be active when learning.

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