

*Full Length Research*

# Perception of Planning, and Marketing of Digital Libraries in Nigerian Tertiary Institutions: An Overview

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The inventions of internet and World Wide Web have made it possible for the information seekers to have hold of information at their fingertips. Because of this, digital library has become a topical and promising topic to be explored amongst the information managers around the globe. Digital library is a concept for collecting, managing, disseminating, and preserving research works created in digital form by researchers in individual organizations and institutions. In other words, digital library represents the meeting point of many disciplines and fields, including data management, information systems, information retrieval, library sciences, document management, the web, image processing, artificial intelligence and human-computer interaction. This is why planning, implementation, and marketing of digital library in Nigeria institutions should include thinking about their use and long-term sustainability in addition to production considerations. This paper discussed the conceptual definition of digital library, concept of planning digital library, major components required for a digital library, planning for digital library, guidelines for digital library and marketing of digital library. The paper also shed more light on some of the Social media platforms digital library can be marketed on, advantages of a digital library, limitations of a digital library and necessary recommendations were put forward such as tertiary institutions in Nigeria should develop communication strategies in order to coordinate marketing actions, and to ensure that all staff share views on key aspects such as audience, message, and channels of objectives planning for digital library planning, etc.

**Keywords:** planning, marketing, digital, library

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## INTRODUCTION

In recent time, there has been a paradigm shift in the concept of library and Information centres. Library services are in transition from local traditional collections to global resources sharing provided on demand via the most advanced networking technologies. Earlier in the traditional form of library and information services, they were concerned with documents in print format and their organization, retrieval and preservation. With the paradigm shift from collection to connection, we are more or less concerned with hybrid libraries, digital libraries and virtual libraries. This is due to introduction of ICT

which has brought about changes in the process of collection development, their organization and accessibility. Formerly, there were no competitors for libraries. At present with the emergence of web and internet, users can access their required information globally at any point of time and space in their work place. Therefore, to maintain the very existence of libraries is in question in this jet age, we have to change our traditional methods of services to modern service methods.

Digital library systems compose a family of automated systems that together provide a comprehensive capability to manage the digital content of an enterprise. As

keepers and providers of information, the age-old social responsibility of libraries is re-emerging in the information society (Lakshmi & Prasantha 2015).

Planning for digital library should include thinking about their use and long-term sustainability in addition to production considerations. Simply creating and providing access to the collections is not enough, as users may not serendipitously stumble across them on the library website or by other means. Therefore, promoting and marketing digital library is essential to helping users discover them. Attempting to promote and market digital library to a general audience on a single platform, however, is not the most effective approach. On the other hand, implementation is the system construction, during which the system is built and tested to ensure it performs as designed. After designing the proposed digital library, the prototype digital library, which has been designed, should be tested to ensure that it performed as designed.

Over the years, there have been various books and articles urging libraries in tertiary institutions in Nigeria to adopt a proactive stance to marketing and promotion of their services (De Saez, 2002 and Rowley 2006). More recently there has been some significant research into the nature of the digital information consumer and other articles commenting on topics such as promoting library services in a Google world (Nicholas, D. & Rowlands 2008) and marketing library services to the Net generation (Schmidt, 2007). Other commentators have discussed more broadly the marketing of academic library services (Spalding, and Wang 2006) and there is a body of research and commentary into promotion and marketing of and through the library website (Gardner, Juricek, & Xu 2008; Detlor, B. and Lewis 2006. & Kaur 2009).

This article, then, seeks to contribute to knowledge on the perception of planning, implementation, marketing and promotion in digital library. Digital library has a key role in the future of every library in tertiary institution in Nigeria, and approaches to the planning, implementation, marketing and promotion in digital library, and the associated services digital library provides may offer insights into the approach being adopted by academic libraries to establish and promote their role in a digital age.

In this changing environment, to compete with the advanced needs of users, establishment of digital library is an essential component. Today's world is digital world, which is concerned with creation, sharing and using information in digital form. Information is floating in all directions and moving all around us. We have to catch right information and make it available to right person at the right time, which is the aim of any modern library. Digital Library is a collection of digital objects (text, video, audio) along with methods for access and retrieval and also for selection, organization and maintenance. Digital preservation is the method of keeping digital materials

alive so that they remain usable as technological advances render original hardware and software specifications obsolete. Digital preservation is a process by which digital data is preserved in digital form in order to ensure the usability, durability and intellectual integrity of the information contained therein.

### Conceptual Definition of Digital Library

Several terms have been coined at different times to represent the concept of library without books, libraries having information in computer-readable format or having access to information in digitized or digital format. The terms which have been in vogue at different times include: paperless library, an electronic library, virtual library, library without boundaries and more recently digital library. The term digital library, at one hand, is used to refer to a system or applications whose function is chiefly to extend electronic access to material available in a conventional library to remote user, on the other hand, it is used to describe both commercial and academic systems designed to enable electronic access to a large corpora of electronic documents to authorized users.

A digital library is a library in which collections are stored in digital formats (as opposed to print, microform, or other media) and accessible by computers. The content may be stored locally, or accessed remotely. The first published use of the term has been traced to a 1988 report to the Corporation for National Research Initiatives. The term was first popularized by the NSF/DARPA/NASA Digital Libraries Initiative in 1994 Bush (1945) created a vision based on experience ("Digital library.")

Digital library facilitates the ways tertiary institutions, students, and researchers may discover and have access to information. The recent development of new digital technologies offers new opportunities to enhance the ability of libraries to fulfil their missions in terms of access, preservation, research, and education. There is no single definition for digital libraries. And as times goes by, we know more and more about digital libraries, the definition evolves. From information management point of view, digital libraries are systems that combine the machinery of digital computing, storage and communication, the content, and software needed to reproduce, emulate, and extend the services of collecting, cataloguing, finding and disseminating information offered by traditional libraries based on paper and other materials. Digital libraries controlled collections of information bearing objects (IBOs) that are in digital form and that may be organized, accessed, evaluated and used by means of heterogeneous and extensible set of distributed services that are supported by digital technology. In his view Clifford Lynch (Clifford Lynch,

1995) a well-known expert on digital libraries and new technologies, defined digital library as “a system providing a community of users with coherent access to a large, organized repository of digital information and knowledge. In corroboration with this, (Michael Lesk, 1995) who predicts that half of the materials accessed in major libraries will be digital by the early 21st century defines digital libraries as “organized collections of digital information that combine the structuring and gathering of information, which libraries and archives have always done, with the digital representation that computers have made possible. The digital library is not just one entity, but multiple sources seamlessly integrated.” From the user point of view, digital libraries are systems that provide a community of users with coherent access to a large, organized repository of information and knowledge. Hence, the term digital library according to Alonge (2019) may mean different things to different people. It has been applied to an extraordinary range of applications and is frequently used to denote one or more of the followings:

- Collections in which complete contents of documents (as opposed to bibliographic citation or abstracts) are created or converted to computer processible form for online access;
- Providing digital access to material that already exists within traditional library collections, i.e. libraries of

scanned image, images of photographic or printed texts, digital video segments;

- Scientific data sets like protein sequences or nucleic acid sequences, etc. Software libraries or multimedia works are often referred to as a digital library;
- Online databases and CD ROM information products, particularly those with multimedia or interactive video components or those which contain the complete contents of books or other publications;
- Computer storage devices on which information repositories reside, such as optical discs, juke boxes, CD ROM / DVD ROM towers, etc.;
- Database, including library catalogue accessible through the Internet; and
- Digital audio, video clips or full-length movies.

A digital library is not merely a collection of electronic information; it is an organized system of information that can serve as a rich resource for its user community. The library and information science community treat digital libraries as “logical extension and augmentation of physical libraries in the electronic information society (Marchionini, Plaisant, & Komlodi 1998).

Shiri (2003) and Lynch (2001) stated that, “digital libraries provide users with coherent success to a very large, organized repository of information and knowledge.

**The contrast between traditional and digital libraries is presented below:**

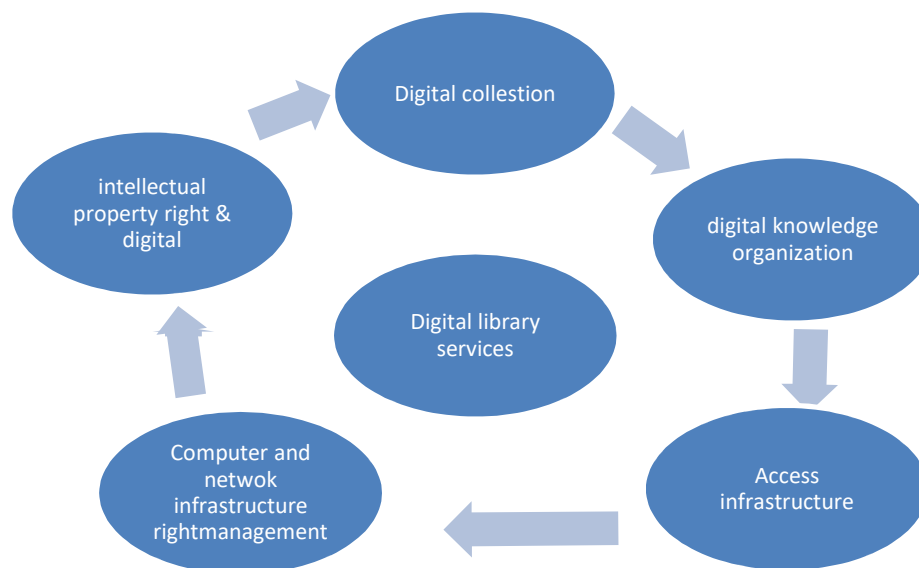
<b>Traditional Libraries</b>	<b>Digital or Electronic Library</b>
Print collection	All resources in digital form.
Stable, with slow evolution	Dynamic and ephemeral
Individual objects not directly linked with each	Multi-media and fractal objects other
Scholarly content with validation process	More than scholarly content with various validation processes
Limited access points and centralized management	Unlimited access points, distributed collections and access control
The physical and logical organization correlated	The physical and logical organization may be virtual
One way interactions	Dynamic real time dialogue
Free and universal access	Free as well as fee based
Flat structure with minimal contextual Metadata	Scaffolding of data structures and richer contextual metadata

## Concept of Planning Digital Library

The planning process used for digital library development varies significantly from library to library. In some libraries, a well-developed and strictly followed process may be in place, while in other libraries a more laissez-faire approach may be taken where the project just develops as things go along. In reality, neither approach is appropriate in every situation. Conditions will change and opportunities will arise that make it impossible or unwise to follow a rigid, formal process (Cervone, 2009). Significant shift in academic publishing has occurred from print to digital, although the difference in degree of shift between subject areas and types of publication is quite marked. With this shift towards digital there have been notable implications for serious planning strategy for digital library for acquisition, organisation dissemination and retrieval (Collier, 2006). Libraries are obviously not all the same and the planning of digital library will differ considerably, depending on whether the focus is on research or teaching and learning. According to Alonge (2019), the most significant shift is in building digital a collection is greater interoperability among information systems across the networks. With the technology available at an affordable cost, the libraries are initiating small digitization projects as individual library or as a group of libraries. Building-up digital collection and infrastructure required to access them is a challenge that every library has to deal with. Today's digital libraries are built around Internet and web technologies with electronic journals as their building blocks. The increasing popularity of Internet and developments in web technologies are catalyst to the concept of digital libraries.

## Major Components Required For a Digital Library

This can broadly be divided into six (6) major categories according to Alonge 2019 which are namely:



1. **Digital Collections infrastructure:** The most important component of a digital library is the digital collection it holds or has access to. Viability and extent of the usefulness of a digital library depends upon the critical mass of digital collection it has. The collection infrastructure typically consists of two components, i.e. metadata and digital objects that a digital library holds. The metadata provides bibliographic or index information for the digital objects. While digital objects are the primary documents that users are interested to access, it is metadata that facilitates their identification, retrieval

and location using variety of search techniques. Information content of a digital library, depending on the media type it contain, may include a combination of structured / unstructured text, numerical data, scanned images, graphics, audio and video recordings and other multimedia content. Different types of resources need to be handled differently in a digital library.

2. **Digital knowledge organization:** Traditional library consists of physical objects such as books, journals, conference documents, standards, patents,

video, microfilms and CDs that are organized into various collections such as Text Books, General Books, Reference Books, Rare Books, Audio-visuals, CD ROM Collections and Journals. Each collection is further organized using classification schemes such as Dewey Decimal Classification, Library of Congress Classification, Universal Decimal Classification, Colon Classification, etc. so as to bring books on same subject together and facilitate browsing documents on the shelves. Moreover, each book is catalogued and assigned subject headings using standard subject headings and thesauri like Library of Congress Subject Headings (LCSH), Medical Subject Headings (MeSH), Sear's Subject Headings, etc. so as to facilitate their retrieval using Library OPAC. While physical libraries are organized at physical level, i.e. books, journals, theses, reports, reference books, textbooks, etc., digital libraries are organized at digital objects level which may include a combination of structured/unstructured text, numeric data, scanned images, graphics, articles in a journal or chapters in a book and other multimedia objects.

A disc full of digital objects without any organization, browse, search and navigation options would be completely useless and meaningless since these digital objects need to be organized and made accessible to the user community. An effective and efficient access mechanism that allows a user to browse, search and navigate digital resources becomes necessary as electronic resources of a collection grow in number and complexion. As digital libraries are built around the Web and Internet Technology, it uses object and addressing protocols of the Internet.

**3. Access infrastructure: Browse, Search and Navigation Interfaces of Digital Library.** An effective and efficient access mechanism that allows a user to browse, search and navigate digital resources becomes necessary as electronic resources of a collection grow in number and complexion. While the access infrastructure for a traditional library is OPAC/WebOPAC (including journals holding), the access infrastructure for digital libraries consists of browse, search and navigational interfaces for individual digital libraries, specialized indices for specialized local collections, portals or subject gateways for web resources and an integrated interface for all e-resources accessible to a given library including library OPAC.

**4. Network and Computing Infrastructure:** A typical digital library in a distributed client-server environment consists of hardware and software components at server side as well as at the client's side. Clients are machines that are used for accessing digital library by users while the server hosts databases, digital objects, browse, search and navigational interfaces to facilitate its access.

Computer hardware, software and network infrastructure for a digital library can broadly be divided into the following four categories:

- i) Server-side Hardware Components including input devices, storage devices, Communication Devices, etc.;
- ii) Server-side Software Components including image capturing or scanning software, image enhancement and manipulation software, web servers, information retrieval software, Optical Character Recognition (OCR) software, Database Management System (BDMS) Software, Digital Rights Management (DRM), etc.;
- iii) Client-side Hardware PCs, laptops and mobile devices; and
- iv) Client-side Software Components including Web browsers, Adobe's Acrobat Reader, media players, word processing software, spreadsheet software, image processing software, etc.

**5. Intellectual Property Rights (IPR) and Digital Rights Management:** Copyright has been called the "single most vexing barrier to digital library development" (Chepesuik, 1997). The current paper-based concept of copyright breaks down in the digital environment because the control of copies is lost. Digital objects are less fixed, easily copied, and remotely accessible by multiple users simultaneously. The libraries, unlike private businesses or publishers that own their information, are simply caretakers of the information. Physical ownership or possession of material by a library is not necessarily an indicator of ownership of corresponding copyright. It is unlikely that libraries will ever be able to freely digitize and provide access to the copyrighted materials in their collections. Instead, the developers of digital libraries are obliged to take permission for inclusion of copyrighted material in digital form or develop mechanisms for managing copyright, mechanisms that allow them to provide information without violating copyright. Copyrights and IPR issues are governed by the constitutions of various countries and through international treaties like the Berne Convention. Copyright is manifested in terms of licenses and agreements in the digital world. A library is required to sign licenses to acquire access to a digital collection. The terms of licenses for digital collection vary in terms of conditions, the variety of pricing models and access limitations (see Collection Development – licensing contents). The library associations and publishers are working on model licenses that can be adopted uniformly. The libraries can negotiate with the publishers on behalf of their institutions or as a consortium of libraries. Access management variably called, access control, terms and conditions, licensing conditions and Digital Rights Management (DRM) refers to control of access to digital libraries. Digital Rights Management (DRM) is a system of solutions created or designed as a means to prevent

unauthorized access, duplication and illegal distribution of copyrighted digital media. The DRM technology was created for the publishers as a means to stop illegal reproduction and distribution of their products. In online environment, the scope of DRM can be leveraged to control access to and usage of digital objects and to impose restrictions on their misuse.

6. **Digital Library Services:** The digital resources and associated technical infrastructure is only a means to generate services keeping its potential users in mind. Like printed resources are used in traditional libraries to generate services by the library staff, the digital resources are used to generate services using software driven web-based interfaces. Computer programs substitute for the intellectually demanding tasks that are traditionally carried out by skilled professionals. Activities that require considerable mental activities, like reference service, cataloguing and indexing, seeking information, etc. are performed by computer programs through web-based interface with or without human interventions.

### Planning For Digital Library

Digital libraries serve communities of people and are created and maintained by and for people. People and their information needs are central to all libraries, digital or otherwise. All efforts to plan, design, implement, and evaluate digital libraries must be rooted in the information needs, characteristics, and contexts of the people who will or may use those libraries. For the development of digital library, firstly we should plan for our task or objectives of any type of library and what issues are addressed prior for the development of digital library. It is not a detailed of step by step guide, it is used to provide guidance what is wrong and what is right to his/her library, which resources are more valuable for library. Planning is used to provide backbone for any digital library.

There are some points to be kept in mind when planning for digital library:

**Information Needs:** There are three main components of any library, resources, librarian and the most important one is its user. If there are no users there is no need for establishing library. For planning for digital library, we have to keep in our mind which type of users have access it to it and if access are not restricted, what are the next steps for library to fulfil the need of its users.

**Quality in plan:** We plan for what type of software is beneficial for our digital library. Are users are satisfied with it? What are benefits of using this? Is it easy to learn? How searching facility is provided to users in an

easy way? Those entire questions have to be answered before we prepare plans for creating digital library.

**Security issues:** Security issues for the development of any digital library are must. There are some pre-planned rules of using digital library which are to be clarified concern how users access their desired information. Backup plan, if in case of any mis-happening is also required. How to control security threat protection (firewall, antivirus, etc.), has to be determined.

**IT Infrastructure:** Digital library requires well tested and proven information technologies including the multimedia kit, data handling, memory, processing and storage, computer software such as OCR and library application software, etc.

**Digitization:** For digitalization of library resources such as book, serials, thesis, dissertation reports, current and back volumes of periodicals, institutional publications, seminar proceedings in digital form equipment like scanners, printers, digital camera have to be procured.

**Access:** Users are required to be given user ID and password to access the materials in digital form. There should not be limitations for access of digital materials for authorized users.

**Staffing:** The staff have to be trained in handling digital work.

**Funding and Budget:** To meet the expenditure for the digital library, appropriate funds should be provided by the library authorities. Plan for budget, other aspects related to digital library like, human resources, software, hardware application, etc. Upgrading new technologies, etc. are another important aspect for planning a digital library.

**Digital Library Committee:** A digital library committee should be formed to plan for its creation and maintenance. The members must be from various library departments and, if necessary, consultants can be hired. There are at least two ways of developing a digital library, firstly by converting a traditional library into a digital library, and secondly, by direct development of a digital library.

### Marketing of Digital Library

One of the difficulties associated with the adoption of a marketing philosophy, and implementation of appropriate marketing of digital library lies in confusion as to what marketing entails. As Gupta, (2002) explains, some librarians view marketing as being about marketing communication, whilst others view marketing as customer

satisfaction. A useful and context specific definition of marketing has been provided by The Association of Research Libraries Marketing according to Smykla, (1999) is:

*'The organized process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that will (if applicable) satisfy individual and organizational objectives. Marketing collects and uses demographic, geographic, behavioural, and psychographic information. Marketing also fulfils the organization's mission and, like public relations inspires public awareness and education' (p. 3).*

Planning for digital collections should include thinking about their use and long-term sustainability in addition to production considerations. Simply creating and providing access to the collections is not enough, as users may not serendipitously stumble across them on the library website or by other means. Therefore, promoting your library's digital collections is essential to helping users discover them. Attempting to promote all collections to a general audience on a single platform, however, is not the most effective approach.

Questions to ask at the outset are: Who do you want to reach, and why? Along with your available resources (budget, personnel, etc.) and the collection content itself, identifying the goals and audience for your digital collections will guide you in selecting marketing strategies and maximize the likelihood of a positive outcome for your efforts.

### **Some of the Social Media Platforms Digital Library can be Marketed on**

➤ **Wiki:** Wiki is a collaborative web site which can be directly edited by anyone with access to it Wikipedia.org (2020). Engard (2006) discussed extensively how libraries can use wikis. The paper gave brief descriptions on the experiences of how wikis were successfully implemented in their web-based library services. Harinarayana and Raju (2010) found that wikis are the least applied of the Web 2.0 features in academic libraries. Wikis are collaborative tools that are often used for knowledge sharing, knowledge creation, and collaboration on research and other projects. Studies have shown that librarians use wikis to collaborate with librarians in other libraries, and that few libraries use wikis to collaborate with patrons (Kim & Abbas 2010). However, Wikis are fertile ground for copyright infringement because anyone with access could copy and paste from any source to which they had access.

➤ **Blog:** Blog is a web site, usually maintained by an individual, with regular entries of commentary, descriptions of events, or other material such as graphics or video (Wikipedia.org). Libraries all over the world are using blogs for the easy dissemination of information to the targeted users. Blogs can be used to communicate library events, publicize information resources, train staff, and offer subject-related reference services (Han & Liu 2010). The researchers observed that among five libraries setting up blogs, two of them used blogs mainly for librarians' training or communication, not for patrons. Two libraries according to the researchers have blogs that are used to publicize news about information resources and library events. According to Virkus (2008) "blogging is one of the most highly favoured features of Web 2.0." Blogs encourage user interaction through the comment feature, which allows students to provide feedback regarding the information provided and on the library itself.

➤ **Instant Messaging (IM):** IM is a live online communication synchronous channel which facilitates online interaction between two parties. Instant Messaging (IM) is also a very useful tool which may help library professionals to provide library services. IM is currently used by many libraries to provide online reference services. "Ask a librarian" services are provided by instant messengers all over the world. Reference questions are answered immediately without the need to go to a reference desk. Librarians and patrons both appreciate the fact that instant messaging is faster than traditional chat services, and librarians also like the fact that the software can be downloaded for free [Houghton & Schmidt]. Hvass and Myer (2008) reported the results of a case study evaluating the introduction of an IM reference services. The study revealed that it was possible to set up an IM service without the need to purchase hardware or software. From just an interactive feature, IM has evolved into offering not only text messages, but also multimedia resources such as photos, videos, etc. (Harinarayana and Raju 2010).

➤ **Really Simple Syndication (RSS):** RSS is lightweight XML format which is used for publishing frequently updated content such as blog entries, news headlines, and podcasts in a standardized format (O'Reilly, 2005). Harinarayana and Raju, (2010) reported that of the 57 library web sites considered for the study, 37 (64.91 per cent) of them had RSS feeds in their web sites. The purpose of providing RSS news feeds in university library web sites varied from publishing library news in providing information about institutional classes to subscribing to RSS feeds to disseminate library news/announcements/events and exhibitions. Their study also revealed that a total of 12 (37.43 per cent) academic libraries web sites used RSS feeds to alert users about

the arrival of new titles/new acquisitions. Han and Liu (2010) gave three purposes of RSS application in academic libraries; the first and basic one is the notification of information of interest to patrons which are initiated by libraries such as library news and events, and new books available. The second and most demanding function is the notification of personal information produced by patrons' utilisation of library services such as the circulation record. The third purpose is for the easy and timely syndication of subject-related information for patrons.

➤ **Facebook:** With the enormous popularity of Web 2.0's social networking platforms, libraries of all types have embraced them as a method of promoting themselves within their communities. Facebook started with college students at Harvard and originally permitted only users with a college e-mail address to register (Chu, & Meulemans 2008). Recent studies have shown estimates placing Facebook with an 85 per cent market share among college students [Matthews, 2007]. As a result of its strong user base among college students, Facebook appears to be the most logical social networking web site to be used by academic libraries. One of the primary uses of Facebook by academic libraries is to market the library with a library fan page. Libraries advertise hours, location, and web site information. By linking to the library's web site the Facebook page acts as a portal to the library (Farkas, 2007a). Libraries also create events invitation programs as an additional forum to promote library activities (Chu, M. and Meulemans 2008). Using Facebook applications, some academic libraries embed the library catalogue to allow students to access the content of the library catalogue without actually visiting the library's web site (Farkas, 2007a).

➤ **Twitter:** Twitter allows registered users to post brief messages for other users who follow the account and to comment on other users' posts. Twitter allows librarians to go where the students are already located. Libraries post hour changes, events, new resources available, search tips, deadlines, and links to the library web sites. They also place responses to students' comments, and news affecting students without the requirement that students visit the official library web site. Many libraries use Twitter for both instant messaging and for short announcements about library events and services (Kim, & Abbas 2010). Wyatt and Hahn (2011) advised that libraries should always give attribution for quotes and that students should also be encouraged to give attribution for quotes, possibly in a shortened form. They also advice that a user policy should be developed which should be mandatory for students to read before using these services.

➤ **Podcast/Streaming video and content:**

Podcasts are audio contents available on the Internet that can be automatically delivered to a personal computer or MP3 player (O'Reilly , 2005). Podcasts are audio contents available on the internet that can be automatically delivered to a personal computer or MP3 player (Geoghegan, & Klass 2005). The podcasts give the user an opportunity to listen to recorded intellectual outputs online without any additional software and to download the same for later use. Podcasts and vidcasts have been used successfully in delivering library web-based services (Harinarayana, & Raju 2010). Podcasts have proved to be an effective communication medium into and out of Second Life, and many users have created podcast listening stations and/or are podcasting from Second Life to Real Life (Parker 2008 Parker). Jowitt (2008) conducted a study on the use of library instructional podcasts by the staff and students at the University College of Learning (UCOL). The hope was to provide New Zealand's academic and other libraries with a current picture of podcasting into library instruction and an insight into whether this might be a sustainable new technology. The research shows that podcasting for library instruction would benefit UCOL as an institution, showing potential as an alternative communication medium (Abram, 2005).

➤ **Flickr/YouTube:** Flickr allows users to post photographs and to create discussion groups. Academic librarians post photos of the library and its staff to provide a virtual tour of the library while simultaneously putting a human face to the building. A general search of Flickr reveals that most academic libraries use Flickr to post pictures of the library building and its staff (Farkas, 2007). YouTube provides the user with the ability to save favourite videos, create a playlist, rate videos, make comments about them, and share them with other users. Wyatt and Hahn (2011) advise that libraries that host community photographs should have a copyright statement policy and should ask that only original photographs taken by the user be uploaded to the site. According to the researchers, if a copyright owner wants material removed, a policy should be in place to handle copyright complaints by the copyright holder and also a rebuttal form for the user who posted the questioned photograph.

➤ **Social bookmarking/tagging:** Social bookmarking is a tool used to mark web pages which a user found relevant, tag them with a keyword which will make them retrievable in the future, and also to send these sites to other users who might find them useful as well (Gorden-Murname, 2006). An example of social bookmarking software is del.icio.us which was specially created to organize, store, and increase retrieval in a large collection of bookmarked web sites. It has been



found that both undergraduate and graduate students use the bookmarking function very frequently when it is offered by the library ( Kim, Y-M & Abbas 2010).

➤ In order to meet the patrons' needs, many academic libraries have made their sites more attractive by offering bookmarking, tagging, and the ability to add book reviews/ratings/summaries. Also, some academic libraries have added Library Thing to their catalogue, which enables patrons to add tags and recommendations to books which they have read (Kroski, 2008). Book reviews, rating of books, and book summaries also enable patrons to become involved in the library as a community (Wyatt, & Hahn 2011)

### Advantages of a Digital Library

The advantages of digital libraries include:

- Immediate access to high-demand and frequently used items.
- Rapid access to materials held remotely.
- The ability to reinstate out-of-print materials.
- The potentials to display materials that are in inaccessible formats, for instance, large volumes or maps.
- The potential to conserve fragile / precious originals while presenting surrogates in more accessible forms.
- The potential for presenting a critical mass of materials.

### Limitations of a Digital Library

Besides the several advantages listed above, there are also some limitations of digital libraries as below:

- Lack of screening or validation
- Lack of preservation of a fixed copy (for the record and for duplicating scientific research)
- Lack of preservation of "best in class"
- Difficulty in knowing and locating everything that is available, and differentiating valuable from useless information
- . Job loss for traditional publishers and librarians
- Costs are spread and many become hidden.
- Copyright, initial high cost, bandwidth, speed of access and preservation

### CONCLUSION

Given the paucity of research into the concept of planning, and marketing of digital library, there is plenty of scope for further research, which would both inform

practice and contribute to understanding of and knowledge on marketing in libraries. Currently there is a strong and welcome emphasis on understanding evolving information behaviour of the digital information consumer. This however, needs to be complemented by research on strategies and approaches associated with responding to, communicating with, or influencing such behaviour. Studying information behaviour in the absence of knowledge of marketing strategies is tantamount to developing an understanding of consumer behaviour in commercial settings, but declining to take an interest either as practitioners or researchers in planning, and marketing of digital library.

### RECOMMENDATIONS

- The tertiary institutions in Nigeria should develop communication strategies in order to coordinate marketing actions, and to ensure that all staff share views on key aspects such as audience, message, and channels of objectives planning for digital library planning.
- Tertiary institutions in Nigeria should recognize and proactively manage the inherent tensions between planning and marketing and the capacity to respond to increased demand accordingly,
- Management of Tertiary institutions in Nigeria should keep staff engaged through effective internal marketing.
- There should be continuing innovation in relation to the range of marketing tools in use, and reflecting on the integration of service delivery and marketing communication of digital library through the digital channel.
- Painstaking attention should be paid to the use of marketing tools that facilitate two-way communication with users, and an appreciation of the different roles of different tools for different user groups should be developed.
- There should be a premeditated approach by the staff of the libraries in tertiary institutions in Nigeria to influencing word-of-mouth, both digital and face-to-face, as a means of engaging and communicating with academics and students, and integrating word-of-mouth into a wider marketing communications strategy.

### REFERENCES

- Abram, S. (2005). "Web 2.0, Library 2.0 and librarian 2.0: preparing for the world", *ImakeNews Inc.*, Vol. 2(1) pp. 1-3.
- Alonge Ayodele. (2019). Introduction to Digital Library. Lecture note on LIS 714 Digital Libraries, Week One (1)

- Lead City University, Ibadan Oyo state Nigeria.
- Bush, V. (1945). As we may think. Atlantic Monthly
- Cervone, H. F. (2009). Strategic analysis for digital library development. *International Digital Library perspectives*, (25)1, 16-19. doi: 10.1108/10650750910931887.
- Chepesuik, R. (1997). The future is here: America's libraries go digital. *American Libraries*, 2(1), 47-49,
- Chu, M. and Meulemans, Y. (2008). "The problems and potential of MySpace and Facebook usage in academic libraries", *Internet Reference Services Quarterly*, (13)1, pp. 69-85.
- Clifford Lynch. (1995). A search reveals that there are over 13,000 appearances of this term on the web, including a webcast on the subject
- Collier, M. (2006). Strategic change in higher education libraries with the advent of the digital library during the fourth decade of program. *Electronic library and information systems* (40)4, 334-345. doi: 10.1108/00330330610707917.
- De Saez, E. E. (2002). *Marketing Concepts for Libraries and Information Services*, 2nd ed., Facet, London.
- Detlor, B. & Lewis, V. (2006). "Academic library websites: current practice and future directions", *Journal of Academic Librarianship*, (32) 3: 251-258.
- Edward A. F. (1999). The digital libraries initiative: Update and discussion. *Bulletin of the America Society of Information Science*. 26(1).
- Engard, N. (2006). "IL Wikis for libraries", available at: [http://librarianinblack.typepad.com/librarianinblack/2006/10/il\\_2006\\_wikis\\_f.html](http://librarianinblack.typepad.com/librarianinblack/2006/10/il_2006_wikis_f.html)
- Farkas, M.G. (2007). "Going where patrons are", *American Libraries*, Vol. 38 No. 4, p. 27.
- Gardner, S. J., Juricek, J. E. & Xu, F. G. (2008). "An analysis of academic library web pages for faculty", *Journal of Academic Librarianship*, (34) 1, 16-24.
- Geoghegan, M. W. & Klass, D. (2005). Podcast Solutions: The Complete Guide to Podcasting, Friends of E D, Berkley, C A.
- Gupta, D. K. (2002). "What is marketing in libraries? Concepts, orientations, and practices", *Information Outlook*, Vol. 6 No. 11, pp. 24-30;
- Han, Z. & Liu, Y.Q. (2010). Web 2.0 applications in top Chinese university libraries. *Library Hi Tech*, 28(1), 41-62
- Harinarayana, N.S. & Raju, N.V. (2010). Web 2.0 features in university library web sites. *Electronic Lib.*, 28(1), 69-88
- Houghton, S. & Schmidt, A. (2005). "Web-based chat vs instant messaging: who wins?", *Online*, (29)4, pp. 26-30.
- Hvass, A. & Myer, S. (2008). "Can I help you? Implementing an IM service", *The Electronic Library*, (26)4, pp. 530-544.
- Jowitt, A. (2008). "Perceptions and usage of library instructional podcasts by staff and students at New Zealand's Universal College of Learning (UCOL)", *Reference Services Review*, (36)3, pp. 312-336.
- Kaur, K. (2009). "Marketing the academic library on the web", *Library Management*, Vol. 30, Nos 6/7, pp. 454-468.
- Kim, Y-M & Abbas, J. (2010). Adoption of Library 2.0 functionalities by academic libraries and users: A knowledge management perspective, *J. Acad. Lib.*, 36(3) 211-18
- Lakshmi1 S. & Prasantha M. Kumari2 (2015). Planning and Implementation of Digital Library in Engineering Colleges of Andhra Pradesh: A Study. *International Journal of Advanced Library and Information Science* (3)1 101-110
- Lynch, C.A. (2001). "The Battle to Define the Future of the Book in the Digital World," *First Monday*, 6 (6) 4.
- Marchionini, G., Plaisant, C. & Komlodi, (1998). A. Interfaces and tools for the Library of Congress National Digital Library Program. *Information Processing and Management*, 34(5), 535-555.
- Matthews, B. (2007). "Moving beyond the reference desk: being where users need us", *The Reference Librarian*, (48)2, pp. 9-13.
- Mi, J. & Nesta, F. (2006). "Marketing library services to the Net generation", *Library Management*, (27) 6/7, 411-422.
- Michael, Lesk (1997) Practical digital libraries: Books, bytes and bucks. San Francisco, Morgan Kaufman
- Nicholas, D. & Rowlands, I. (2008). *Digital Consumers: Reshaping the Information Professions*, Facet Publishing, London.
- O'Reilly, T. (2005). What is Web 2.0? Retrieved April 13 2020, from <http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html#mememap>.
- Parker, L. (2008). "Second Life: the seventh face of the library?" Program: Electronic Library and Information Systems, Vol. 42 No. 3, pp. 232-242.
- Rowley, J. (2006). *Information Marketing*, 2nd ed., Ashgate, Aldershot.
- Schmidt, J. (2007). "Promoting library services in a Google world", *Library Management*, (28) 6/7; 337-346.
- Shiri, A. (2003). Digital library research: Current developments and trends. *Library Review*, 52(5), 198-202
- Smykla, E. O. (1999). "Marketing and public relations activities in ARL Libraries: a SPEC kit", SPEC kit, 240, Association of Research Libraries, Office of Leadership and Management Services, Washington, DC.
- Spalding, H. H. & Wang, J. (2006). "The challenges and opportunities of marketing and academic libraries in the USA: experiences of US academic libraries with global application", *Library Management*, (27) 6/7; 494-504.
- Virkus, S. (2008). "Use of Web 2.0 technologies in LIS education: experiences at Tallinn University", Estonia. Program: Electronic Library and Information Systems, (42)3, pp. 262-274. Wikipedia.org

Wyatt, A. M. & Hahn, S. E. (2011). "Copyright concerns triggered by Web 2.0", *Reference Services Review*, (39)2, pp. 303-317.