

RESEARCH ARTICLE

USABILITY EVALUATION OF LIBRARY WEBSITES THROUGH CONTENT AND AESTHETIC QUALITIES IN SELECTED UNIVERSITIES IN SOUTHWEST NIGERIA

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ABSTRACT

The library website is a task-oriented webpage(s) that requires regular evaluation. However, analyzing the content and aesthetic qualities of a library website is an essential ingredient for its usability testing. Hence, this study evaluated the content qualities and aesthetic features of university library websites in Southwest Nigeria. The study adopted a descriptive survey research design. The unit of analysis comprises undergraduate students from the six selected universities in southwest Nigeria, and their population stood at 99,939. The study used a simple random sampling technique to select its samples and the sample size for the study is 398. A checklist and questionnaire were used as instruments for data collection. Collected data were analyzed using Statistical Package for Social Sciences (IBM-SPSS) version 21. The result of findings indicated that premium is placed more on aesthetic features than content quality and none of the understudy library websites has features for Frequently Asked Questions (FAQ), list of the new arrivals and space for advert placement. Based on the study analysis, the Kenneth Dike Library website of the University of Ibadan and Covenant University Resource Centre is better in terms of content quality than other university library websites in Southwest Nigeria. Library websites were found to be useful and yet not optimally utilized by the users due to the absence of some content and aesthetic features that tend to improve the usability of the library website. Consequently, the university library needs to prioritize its presence online and as well add features that will engage and elicit feedback from users. They also need to publicize among the users the use of library websites as veritable sources of scholarly information and communication.

KEYWORDS

Usability, Library Website, Website Evaluation, Aesthetic Features, Content Qualities

1. INTRODUCTION

The information and communication technology (ICT) environment has evolved and as such influences patrons' information-seeking behavior, such that, users are becoming more and more technology perspicacious, agitating for anywhere anytime access to information. Besides, there is an undelaying assumption that libraries are very much far away from the users, and this premise pre-empts the need for libraries to bring information services to the doorstep of users. Thus, libraries started expanding their modes of operation by improving their presence on cyberspace (online) via a platform designated as a library website, and this site constitutes computer files, encoded with Hypertext Mark-up Language (HTML) which contains texts, graphics, audio-visuals and animations. A website taken from the functionality point of view is a group of connected webpages that brings together information from diverse sources in a unified way. This means that the web offers libraries the potential for more revolutionary change.

The concept library website represents a web page or group of connected

web pages that allows modern libraries to publicize and propagate their services, resources, mission and vision to users over the internet. A library website is a site consisting of a webpage(s) or interfaces with access to library resources and services. As stated in apposition, it is a library portal that provides users with access to electronic information resources. Duncan defined a web portal from a library context as a compendium of knowledge that exposes library users to various information needed for research and personal development (Duncan, 2010). A library website could also be seen as an entry point to the world of information that was purposefully developed to save the time of library users and more so serve as guides and links to other relevant information resources. It presents an image of an information repository on the web that helps users from being overwhelmed with information overload. It is a librarian-users interface that provides access to a wide variety of information resources within and outside of the library.

A library website could as well serve as an information hub with a density of electronic information resources that mediate users' engagement with information resources in the digital environment. Library websites are

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devoid of limitations in terms of opening and closing hours associated with the operations of physical libraries. Advocating this is Mane and Panage, who emphasized that a library website is a web-platform where information services are made available to users at one stop on a secured and customized webpage(s) that includes a broad array of services that include literature searching tools, OPAC, direct access to e-books and e-journals, as well as a virtual help desk for users' queries (Mane and Panage, 2015). It is a virtual way of getting users acquitted with library resources and services. It extends not only credence to library services but also initiates impression as to whether a library is capable of continually meeting the information needs of millennial users.

Be that as it may, web-based information services allow libraries to make an electronic version of their resources available and accessible online. It also allows libraries to render services such as digital acquisition or subscription to database, virtual reference services and Online Public Access Cataloguing (OPAC) services among other services. Web-based library and information services unprecedentedly activate multiple users' interaction and access to library information resources. In a nutshell, a library website is an offshoot activity of traditional library services where the same library tasks and functionalities are being replicated. It is a cost-effective and timely form of communication that promotes the image of the library, its services, programs and resources on the internet. In congruence with forgoing, posited that a library website fosters quality and dynamic library service as it provides a platform on cyberspace where users can remotely access the library resources (Mohammed and Jiji, 2019).

Library websites symbolized the most effective communication channels as well as the interactive interface between the libraries and the users. The imperative usefulness of library website gives prominence to a rapid expansion of inter-library loan cooperation, resource sharing among libraries in consortium as well as improvement on information infrastructure for remote learning and access to information (Habibi, et al., 2019). The library website symbolizes the library as the opulence of the parent institution to the world of virtual and digital reality. Summarily laid on the line, library websites constitute the virtual gateway and users' access key to library resources at a glance.

Library website usability encourages users' patronage and also enhances information credibility. This makes the effectiveness of a library website depend to a large extent on its usability which denotes users' rate of patronage and higher performance. Library website usability can be measured by its content qualities alongside its aesthetic features. Most importantly, content quality symbolizes authority and up-datedness of information presented on the library website alongside other features such as search bar, navigational tools and many more, while aesthetic features, on the other hand, inspire user perception or impression feels of the library website. The content and aesthetic features work hand in hand, such that content represents the information resources on the library website while aesthetic features depict the design, arrangement and layout of the content. A good blend of content and aesthetic features dictates the usability level of a library website.

Corroborating the foregoing, was Pant, who advocated that users' satisfaction is enhanced when content and aesthetic features (such as user interface) on a library website reflect user viewpoint of usability (Pant, 2015). Library users visit the library website purposely to seek or access information, buttressing how important information content is to library website usability evaluation. Nevertheless, in the absence of good aesthetic design or layout, users get bored and at times find it difficult to locate information on the library website. Good aesthetic design is equally as important as the content quality, and this is because users lose interest in the library website when the design and layout fail to provide them with quick navigation tools to access the needed information. This position was buttressed by Rosy, who stressed that no matter how high-quality information a library website may contain, users stop using it once they reflected on it to be time-wasting (Rosy, 2019).

Library websites are now becoming users' most preferred choice source

of information, communication, learning and social contact. The library operations on these sites alone are not enough because attention also needs to be directed to the content quality, its presentation on the website as well as other aesthetic design of the library website. Aesthetics play an important role in supporting the content and functionality of the website. It also appeals to the taste of the users. The first impression of the library website is made-up based on the users' judgment of its aesthetics as well as the quality of the information presented therein. A library website with credible content/information but with low aesthetic features will create an impression in the mind of users that content credibility of information on the library website is doubtful. This impression will invariably make the library website to record low patronage. A usable website is associated with higher performance, a higher level of traffic, increased user performance as well as increased use of special features. Usability studies of library website would enable libraries to place priority focus on user-friendliness, understanding of user needs, ensuring consistency and standards, providing user support, diagnosing errors, improving content quality and aesthetic design.

Academic libraries are regarded as the heart and intellectual nerve center of their parent institutions and owing to the magnitude of their resources, they constitute one of the giant sources of information for users' exploration. They are the best-developed type of libraries in Africa (perhaps not the case in developed countries), but in Nigeria, at least 5% of the total budget of institutions' budgets are allocated to the library. They are better funded compare to other types of libraries. However, because of the caliber of users (students, lecturers, researchers, experts and professionals) of the academic library who are mostly scholars coupled with the fact that the world of information is going digital, one would not underestimate the reason why it has now become a common practice for academic libraries to own a website, be that it's the only means by which they can provide links to e-resources, OPAC, institutional repository, databases and host of other services of the library. Academic libraries most especially university libraries are now using the library website to increase their presence and visibility in an online environment.

Meeting up with the demands of today's users as well as matching up with current trends in library and information services, most university libraries in Nigeria have embraced web-based information services. They have developed an innovative means of meeting the information needs of patrons on an interface designated as the library website. The main thrust of developing the library website was essential to provide quick and remote access to information more efficiently, but contrary to the primary objective, most library websites are driven and designed based on managerial prescription, perspective and specification. However, analyzing the content and aesthetic qualities of a library website is an essential ingredient for its usability testing.

2. STATEMENT OF THE RESEARCH PROBLEM

Website usability denotes the extent to which users find a particular website easy to use, and efficient in performing a specific task satisfactorily, courtesy of the website's content rich-information resources and visual appeal of its aesthetic qualities. Going by this clarification, a library website is considered usable when users can do their intended task without any frustration, which makes sense of users' ease of carrying out information search tasks on the library website. This to a very large extent predetermines users' satisfaction with web-based library information services. Library website usability evaluations have recently emerged as one of the leading areas of concern amongst researchers in the field of library and information science. This has made it imperative for libraries to evaluate their library website usability to get hints of their performances. In recent years, usability evaluation has been carried out in library communities to diagnose the problems of library websites, more so, to gain firsthand information on what needs to be put in place to make library web-based information services better reflect the needs and requirement of today Google generation set of users.

Although, the literature on website usability, in general, is much more complex and elaborate, yet fewer studies on library website usability, with

a specific focus and special interest in aesthetic features and content quality (Al-Qallaf and Ridha, 2019). Corroborating this submission was Ramanayaka et al. that posited there are no sufficient researches conducted on usability evaluation of library websites (Ramanayaka et al., 2017). Similarly, Tella also confirmed that there are limited studies from Africa and Nigeria in particular that focused on the usability of university library websites (Tella, 2019). The usability evaluation of library websites could be measured in several forms; this includes user-based methods using questionnaires and interviews, evaluator-based methods using heuristic evaluation, and tool-based methods using software tools to identify usability problems (Hasan, 2014). However, in the absence of a well-suited evaluation standard that represents users' perceptions; other usability evaluation methods of a website are prone to be introspective. Prevailing over this shortcoming, the researchers complement personal observation of each library website using an evaluation checklist with a structured questionnaire, that sample opinions of library users on their experience feel using their university library websites. The study incorporates two university library websites each from federal, state and private-owned universities, making a total of six university library websites from Southwest Nigeria.

3. SIGNIFICANCE OF THE STUDY

The outcome of this study would give insight on states of university library websites in Nigeria, subject to their level of usability. It would be of benefit to university libraries, as it would serve as a guide on areas of aesthetic design to focus on to ensure ease of access to information. It would help in enhancing the good quality of the library. Aside from the university library, the findings of this study can also be applied to other libraries. More so, it would serve as an addition to the body of knowledge on the design and layout of the university library website and its usability. Finally, it would be beneficial to students, researchers and academics by being a source of empirical evidence in other fields of research.

4. RESEARCH OBJECTIVES

The setout objectives for this study are to:

1. evaluate the university library websites' usability through their content qualities and aesthetic features;
2. examine users' impression feel of the university library websites;
3. examine undergraduate students' level of university library website usage in Southwest Nigeria; and
4. identify the challenges militating against the optimal utilization of university library websites in Southwest Nigeria.

5. REVIEW OF RELATED LITERATURE

Library websites are essential information infrastructure that ensures remote access to library information resources and services in cyberspace. The library website is no more seen as extra services but an essential part of a major campaign for widespread information services. Incidentally, the library website needs to be well developed with rich content and a good design layout that ensures user's ease of use (Velasquez and Evans, 2018). In today's digital age, library users are millennials, technology-savvy, and web centric. They were found to often seek instant access to information sources and resources without any difficulty whatsoever (Tella and Oyedokun, 2014). Correspondingly, libraries started developing web-based information services which serve as a key gateway to library services such as electronic access to information resources, Online Public Access Catalogue (OPAC), virtual reference services and a host of other services on the library website. The web offers libraries the opportunity to disseminate information on a global scale in a virtual space. Be that as it may, the most effective web-based information services of a library appear to be the one that has a clearer sense of user's impression feel (Ahmed, 2017).

Libraries started designing websites around the early 90s (Gholizadel and Asgari, 2010). These websites acted in the capacity of information gateway, windows to the knowledge world as well as playing a pivotal role in the provision of dynamic information services to users (Noroozchakoli, 2010). Library websites have various designs but these websites must

follow a pre-defined standard (Vera and Parto, 2010). If the web design does not follow specified standards, it may lead to some challenges such as searching and indexing problem, disrupting communication between users and the librarians in charge of the library, decreased library website credibility, wasting the time and energy of the users as well as not realizing the goal of information literacy (Nasajpour et al., 2014). Internet is a major source of information, and yet library websites are considered as sources of scholarly educational resources in academia, hence, on the verge of developing this virtual space for library operations, it should reflect the needs of the user. That is, users should be able to locate and access information with ease. The library website should be user-centered, current, relevant, uncluttered, and contain easily understood language (Kous et al., 2018). The advent of the internet and subsequent web-based information services has significantly influenced the way libraries facilitate access to information.

Website evaluation has ever been major concern rights from inception, but the evaluation criteria keep changing with time and technology advancement, such that there is hardly any fixed or globally accepted evaluation criteria since there is a various dimension to its evaluation process. The evaluation of the library website, on the other hand, is not much different from library collection evaluation, since focus and emphasis are placed on content quality and ease of accessibility. The library website is a task-oriented website that requires regular evaluation of its information content, visual appeal of its design and layout subject to users' impression feel of the website (Anyaku and Akpojotor, 2020). The rationale behind the evaluation process was essential to ensure users are furnished with timely and accurate information. On designing a user-centered library website to maximize usability, hinted at information structure, simple display layout, consistency, user feedback and ease of navigation, whereas usability in this context denotes ease of use that needed to be put into consideration when designing library website (Kous et al., 2018). Library website evaluation is an emerging area of study among LIS professionals and parameters for measuring its usability value include content quality analysis as well as aesthetic feature quality for display layout (Devi and Verma, 2018). A library website's usability is an important factor for making its content visible to users, hence, evaluation criteria deal with how well users interact with the library information system. It is one step towards improving ease of use right from the design and development stage or process.

The aesthetic quality of a library website encompasses the layout, presentation of content, color separation, graphics design and all in all, the visual appearance of the website. Majumder and Bose argue that a library website may be visually and structurally overwhelming but what determines the best aesthetics for a library website depends largely on the categories of users that the library is to serve (Majumder and Bose, 2015). If truly the library website symbolizes the library opulence to the world, hence, it should be repertoire with accurate information without compromising the invigorating features that make the website attractive to users. What this implies is that there must be a balance between design and content. This expression is perfectly in line with Polger's position that the library website should adhere to design trends and etiquette without compromising content accessibility and organization (Polger's, 2011). Aesthetic features of library website that can encourage a high level of library website utilization include but not limited to ease of navigation, loading speed, graphic design, catalog accessibility, downloading speed and many more that constitute website attributes, which stimulate library website credibility in the mind of users (Chow 2014). The aesthetic appearance of a library website posited the first impression on the mind of users, and this will go a long way in determining whether or not the user will reinforce his/her patronage of the library website.

In a nutshell, library websites should be designed with a special focus on users' understanding of accessibility and users' friendliness. Be as that may be, there should be a match between system and real-life situation, an improvement on user control and freedom, ensuring consistency and standards, provision for user support, diagnosis and recovery from errors, improved aesthetic features and minimalist design. Also, Majumber and Bose stressed that library websites should be furnished with helping aids

such as frequently asked questions (FAQ), user's feedback, site map, search tools and other emerging tools that aid users in getting help and fulfillment in patronizing the library website (Majumder and Bose, 2015). There are various standards by which website qualities are measure and this may include reliability, ease of access, navigation, search bar, recent/current information and authority. Technical speaking, a library website that ranked very high in its aesthetic qualities would most likely have its content presented more professionally. Logical layout, strategic and professional use of color and graphics would invoke confidence and convey professionalism which would convince users to want to stay on the library website for long and by extension recommend the library website to other potential users.

5.2 Theoretical Framework 1

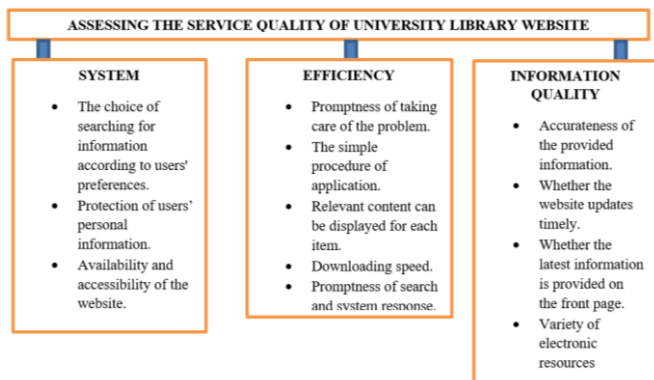


Figure 1: Model for Service Quality of University Library Website (Source: Wu et al., 2013).

The hierarchy for assessing the service quality of a university library website is in three categories: the system, efficiency and information quality. A group researchers developed the model above (Wu et al., 2013). This model was developed by reviewing previous literature as well as collecting opinions from students through a pilot study. The system evaluation criteria focus on users' preference for the choice of search methods for information on the university library website, followed by the level of confidentiality of their personal information on the website as well as the accessibility of the website at any point in time. The efficiency of the university website is being measured alongside the promptness of the response to users' information query, the usability of applications on the website, relevance of information presented therein, downloading time and speed as well as the response rate of search system adopted on the website. The third evaluation criteria focus on information quality which deals with the accuracy of the information, up to datedness of information, latest information on the front page of the website as well as bulk and variety of resources on the site.

5.3 Theoretical Framework 2

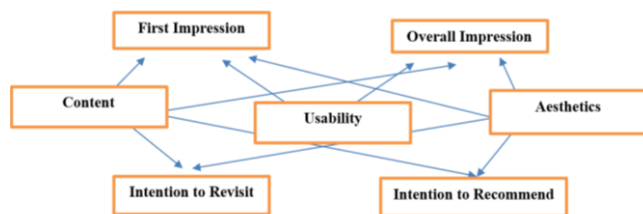


Figure 2: Essential Variables of Website Perception (Thielsch et al., 2014)

Content, usability and aesthetics are fundamental criteria and principles underlying website credibility evaluation. Thielsch and Moshagen find a relationship between the three constructs in the overall judgment of any website (Thielsch and Moshagen, 2015). He orchestrated that the first impression of a website is primarily influenced by the aesthetics judgment, while content and usability exert a considerable influence on website credibility as well. The three constructs form the overall impression of a website; however, the content plays an important role in the prediction of

the user's intentions to revise and recommend the website to other potential users (Thielsch and Moshagen, 2015). A web-user is attracted by the aesthetics of the web-design and is bound by high-quality content, which is presented in a user-optimized manner. The content is vital for the user's intentions to revisit and recommend the website, while the aesthetics operate as a form of visual reinforcement (Thielsch et al., 2014).

5.4 Conceptual Framework

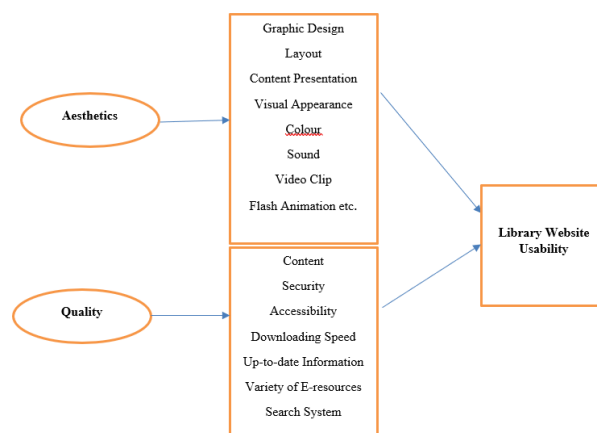


Figure 3: Influence of Quality and Aesthetics on the Library Website Usability Model

The influence of quality and aesthetics on the library website usability model was an extract and adaptation of hierarchy for assessing the service quality of the university library website (Wu et al., 2013). The model was developed further to accommodate aesthetics qualities as enshrined in the literature. The aesthetics feature of a website encompasses the visual, sound and interactive design of the library website. This also includes color selection, typography, layout, pictures, video clips, flash animations, etc. that constitute the design look of the library website. These aesthetics features played an important role in the presentation and communication of content on the website. The quality of a library website is synonymous with its functionality. What this implies is that the library website creates an avenue where users quickly and efficiently obtain information without being delayed by long downloading times or blind alleys while navigating the site. The huge amount of visually and graphically ill-designed library websites demonstrated the notion of some libraries that operate with a narrow conception of content quality at the expense of aesthetics that support the credibility of content as well as the functionality of the website. Quality content without proper handling of the visual effects (aesthetics) suggests a sloppy and unprofessional source, which does not portray the good image of the library. Aesthetics effects are an inevitable part of any website (that one cannot choose whether to include or not) as seamless integration with functionality and content presentation is of great paramount.

5.5 Review of Empirical Studies

Library website evaluation has been carried out over the years for many domains, noteworthy is McConnaughy and Wilson study of content and design features of academic health sciences libraries' home pages, which reported contact addresses, ask a librarian features (virtual reference desk), feedback and suggestion link, subject guide, database and other site search option, year of the last update and responsive web design as features found on surveyed library websites (McConnaughy and Wilson, 2018). Also, in a study of web 2.0 features on the university library website, the verdict has it that library websites of high-ranking universities use their left and right corners of their websites for navigational tools such as search box, and link back to home pages (Harinarayana and Raju's, 2010). It was also reported that most of the library websites used rich sites summary (RSS feed) while others used a link to blogs' space.

A study of the impact of user experience levels on website credibility judgment, where users were grouped into novice, intermediate and expert

(Ahmad et al., 2011). Findings showed that novice users rely on aesthetics features of a website for credibility judgment while expert and intermediate groups do not solely rely on the appearance of the website but also put other features such as the organization of the content, consistency of information, accuracy of content and language usage into consideration in verifying the credibility of information on the library website. In another study carried out on structural and content properties in designing academic library websites based on users' and professionals' viewpoints (Farajpahlou and Saberi, 2009). The study reported that the content is more important than structural design properties. This study emphasized the specialized aspects of content design and the user-friendly aspects of the structural design, which facilitates the users having access to the contents. In a study of LibGuides usability of Calpoly Pomona University, students that participated in the evaluation processes reported frustration with search options in addition to headers' inconsistency (Conrad and Stevens's, 2019). In other respect, Kaushik evaluated national institutes of technology (NITs) library websites and found their aesthetic features first-rated but were found wanting in terms of content relevancy and currency (Kaushik, 2015). Similarly, in study of contents and architectural design of Nigerian university library websites, the verdict has it that there are shortfalls of content quality in Nigerian library websites (Utulu and Bolarinwa's, 2012).

Osareh and Papi carried out a study on the evaluation of the quality of academic library websites in Iran, the result showed that audience characteristics, the website goal, stability, and upload structure had good standings, while ease of search, graphic design, and the scientific background of the writers were mediocre (Osareh and Papi, 2011). Contents update and internal links had a low score. In general, the content and structure of library websites were not satisfactory. Another result reported on usability evaluation of an academic library website: A case of the University of Punjab showed that the investigated universities had paid more attention to the factors of effectiveness and efficiency compared to the factors of learning capability, control, and usefulness (Iqbal and Warraich, 2012). In general, the usefulness factor of the investigated libraries did not have a desirable result. Similarly, a study of the use of university library websites in Pakistan showed that satisfaction regarding the quality of websites (based on content and structure) was mediocre and the users acknowledged the importance of these websites and believed that improvements were necessary (Mairaj's, 2013). Omid and Saeed in a study on a survey of homepages in the central libraries of Azad University showed that the websites have a relatively undesirable situation regarding content, search, and research facilities provided for the users (Omid and Saeed, 2010). However, this study showed that public universities had a better standing compared to other private owned universities.

A group researcher evaluated the college Library websites of the Iranian medical science universities based on the Stover Model where content, search facilities and user services are observed, the report of findings reported enough attention was not given to design and up-datedness of information on the library websites (Nasajpour et al., 2014). Another study on the evaluation of websites of the Iran academic libraries showed that 40.8% of the criteria regarding content, search facilities and services provided for the users are satisfied (Rezaei et al., 2009).

A study of instruction and help services in the academic library websites and Web pages in Sri Lanka, demonstrated the need to pay special attention to the content and method of access to information on the library website (Wickramanayake's, 2012). Findings by on usability evaluation study of the university library websites show that one needs to pay attention to the ease of understanding, flexibility, and content while designing university library websites. On top of it all, a study of content analysis of library websites in Nigeria, adjudicated that most university library websites in Nigeria are bereaved of rich information content, which accounted for more reason why most users are not patronizing them (Mohammed et al., 2014).

The result of studies on evaluation of library website based on content quality and aesthetics design is not consistent as some studies found that content quality influence users' patronage, others suggested structural

features while some emphasize both content quality and structure characteristics. Going by the results of studies reviewed, it could be justified that the attribute of website usability evaluation criteria could not be said to be complete without some great elements of both content and aesthetic qualities. This is to say that user' engagement, overall impression and acceptability of the library website rely upon the resourcefulness of the library to develop a millennial user-friendly website that has a clinch on providing continual access to rich, current and relevant information.

6. METHODOLOGY

The research design adopted for the study is a descriptive survey. The total population for this study comprises undergraduate students of universities under survey and their total population stood at 99, 939. There are forty-nine (49) universities in Southwestern Nigeria, expressly seven federal universities, eleven state universities and thirty-one private-owned universities, and since total enumeration is not viable, two libraries with functioning websites each were randomly selected from the three categories making a total of six university libraries. The study further adopted a simple random sampling technique to select participants. The researchers select samples from the six universities in proportion to undergraduate students' populations of each selected higher institution. The sample size for the study is 398 as suggested in the Israel sample size determination table (Israel, 2003).

The instruments for data collection include both a checklist and a questionnaire. On the validity of the instruments, three research experts scrutinized the instrument and the result of the scrutiny led to the modification and removal of some items. The reliability of the instrument was determined using a test-retest method of reliability testing. This was done by administering twice, same research instrument to 10 respondents in the University of Ilorin, Ilorin, Nigeria at an interval of three weeks. The two data were subjected to statistical analysis, using the correlation coefficient, and the Cronbach Alpha calculation for the two data collected recorded a 0.76 level of correlation, which was considered reliable enough to elicit the true and actual opinion of the respondents. The questionnaire was personally administered to respondents by the researchers. Collected data with questionnaire was coded using IBM-SPSS Version 21.0 and the data collected was analyzed using descriptive statistics of frequency and percentage while checklist was used to evaluate the content and aesthetic features of the surveyed university library websites.

Selected University Libraries in Southwest Nigeria	The Universal Resource Location (URL) of the Library Websites
Kenneth Dike Library (University of Ibadan)	http://ir.library.ui.edu.ng/
Adekunle Ajasin University Library	https://aaau.edu.ng/b/administration/university-library/
Covenant University Library	http://clrmain.covenantuniversity.edu.ng/
Federal University Library, Oye-Ekiti	http://library.fuoye.edu.ng/
Ekiti State University Library	http://library.eksu.edu.ng/
Afe Babalola University Library	http://www.abuad.edu.ng/libraries/

Figure 4: The Universal Resource Location (URL) of Surveyed Library Websites

6.1 Data Analysis and Interpretation

Table 1: Check List for Library Website Content and Aesthetic Qualities							
S/N	Qualities	Kenneth Dike Library	Federal University Library, Oye-Ekiti	Ekiti State University Library	Adekunle Ajasin University Library	Covenant University Library	Afe Babalola University Library
Content Qualities							
1	Authors' Identity and Qualification	√	√	√		√	
2	Up datedness of Information	√				√	
3	History of the Library	√					
4	Advert Placement						
5	Links to Journals	√	√	√	√	√	√
6	Availability of Database	√	√	√	√	√	√
7	Search Features	√	√	√	√	√	√
8	Frequently Asked Questions (FAQs)						
9	News and Events	√	√	√			
10	Virtual Help Desk					√	√
11	New Arrival						
Aesthetic Features							
1	Content Presentation	√	√	√	√	√	√
2	Clear Navigation tools	√	√	√	√	√	√
3	RSS Feeds	√	√	√		√	
4	Live Chat					√	√
5	Site Map		√				√
6	Consistency of font Style and Formatting	√	√	√	√	√	√
7	Appropriateness of Graphic Design		√	√	√	√	√
8	User-Friendly Header and Title	√	√	√	√	√	√
9	Link to OPAC		√	√	√	√	√
10	About Us Section	√		√		√	
11	Browser Friendly	√	√	√	√	√	√
12	Animation features		√	√			

Table 1 presents an account of the evaluation checklist used in evaluating the content and aesthetic qualities of library websites of universities in Southwest Nigeria. Inspection on Kenneth Dike Library website, exhibits strength in many aspects of information/content quality and also in that of its aesthetic designs, but yet recorded deficiency in features such as space for advert placement, frequently asked questions (FAQs) feature, virtual help desk, list of the new arrival, graphic design, OPAC as well as other animation features. Federal University of Oye-Ekiti Library website score 5 out of 11 variables on content qualities, but score 10 out of 12 variables used on measuring aesthetic features. The library website is lacking feature for date of last update, a brief history of the library, a placement for an advert, FAQ, virtual help desk and new arrivals. More emphasis is placed on content quality. The library website lacks live chat and about-us features.

Ekiti State University Library website annexed 5 out of 11 variables used in measuring content quality, but score 10 out of 12 variables of aesthetic features. The library website recorded a dearth of up-datedness of information, history of the library, advert placement, FAQ, virtual help desk and new arrivals, as more emphasis is placed more on the content quality, while on aesthetic features, it lacks live chat and sitemap. Adekunle Ajasin University Website presents good aesthetic features far more than what is obtainable with the quality of information contents it presents. In the presence of other features the library website lack author's identity and qualification, date of last update, history of the library, space for advert placement, FAQ, news and events, virtual help desk, new arrival, RSS feed, live chat, site map, about us and animation features.

Covenant University Library website takes on 6 out of 11 variables used in

measuring content quality but scores 10 out of 12 variables of aesthetic features. This implies that more priority was given to aesthetic features more than content quality. The library website did not have information on the history of the library. There was no space for advert placement, FAQ, news and events and list of new arrivals. Concerning aesthetic features, the website lacks a site map and animation features. Afe Babalola University Library website add-on 4 out of 11 variables used in measuring content quality, and also inked 9 out of 12 variables for aesthetic features. The library website lacks information on authors' identification and qualification. Up datedness of information, history of the library, advert placement, FAQ, news and events and comprehensive list of new arrivals are also missing on the library website. On aesthetic features, the library website did not have RSS feeds, about us and animation features.

In view of it all, none of the library websites surveyed possess features for advert placement, frequently asked questions (FAQ) and a list of new arrivals. These three features are very vital for dynamic information service delivery, in that, an advert placed on the library website did not only serve as a source of revenue but also enhance collaboration and sharing of resources or knowledge, among the merchants, affiliate (the library) and the users (library clientele). More so, frequently asked questions (FAQ) features would save the time of both the user and reference librarian as most questions asked by users have already been answered on the FAQs page or interface, therefore, users need not asked the reference librarian such questions again. Lastly, the library is the one far away from the users and if the library truly wanted to bring information service to the doorstep of users, the library needs to ensure that the list of new arrivals is rightly listed on the library website for awareness and quick accessibility.

Table 2: Demographic Characteristics of the Respondents

	Frequency	Percentage
Institutions:		
Federal University, Oye-Ekiti	10	2.5
University of Ibadan, Ibadan	133	33.4
Adekunle Ajasin University, Akungba	80	20.1
Ekiti State University, Ado-Ekiti	88	22.1
Afe Babalola University, Ado-Ekiti	27	6.8
Covenant University, Idiroko, Ota	60	15.1
Total	398	100
Levels:		
100 Level	96	24.1
200 Level	113	28.4
300 Level	121	30.4
400 Level	34	8.5
500 Level	25	6.3
600 Level	9	2.3
Total	398	100
Gender:		
Male	256	64.3
Female	142	35.7
Total	398	100
Age Bracket:		
16-20	244	61.3
21-25	85	21.4
26-30	24	6
31-35	29	7.3
36 and Above	16	4
Total	398	100
Marital Status:		
Single	360	90.5
Married	38	9.5
Total	398	100

Source: Field Survey

Table 2 shows the demographic characteristics of the respondents. On the institutions of the respondents, distributions showed that 10 (2.5%) of the respondents are students of Federal University, Oye-Ekiti, 133 (33.4%) from University of Ibadan, 80 (20.1%) from Adekunle Ajasin University, 88 (22.1%) from Ekiti State University, 27 (6.8%) from Afe Babalola University and lastly 60 (15.1%) from Covenant University. This implies that the University of Ibadan has the highest number of respondents in the study. On respondents' academic level, 96 (24.1%) of participants are in their 100 level of academic programs, 113 (28.4%) are in 200 level, 121 (30.4%) in 300 level, 34 (8.5%) in 400 level, 25 (6.3%) in 500 level and lastly 9 (2.3%) of the respondents are in 600 level. This implies that the majority of respondents utilized in the study are in 300.

On respondents' gender, 256 (64.3%) are male while 142 (35.7%) are female. The implication is that male respondents have more representatives than their female counterparts. On the age bracket of the respondents, 244 (61.3%) are within the age bracket 16-20, 85 (21.4%) within the age bracket of 21-25, 24 (6%) within the age bracket of 26-30, 29 (7.3%) within the age bracket of 31-35 and lastly 16 (4%) in the age bracket of 36 and above. This implies that the majority of respondents are juvenile, who are technology savvy. On the marital status of the respondents, the majority 360 (90.5%) are single while 38 (9.5%) are married.

Table 3: Content Qualities of Library Websites

S/N	Quality	SA F (%)	A F (%)	U F (%)	D F (%)	SD F (%)	Mean	Ranking
1	The university library website provides sufficient information and resources needed for students	240(60.3)	139(34.9)	6(1.5)	6(1.5)	7(1.8)	4.51	4
2	The university library website provides links to electronic resources	242(60.8)	112(28.1)	30(7.5)	1(0.3)	13(3.3)	4.43	6
3	The author or content creator of the information on the library website can be contacted for clarification of issues	121(30.4)	104(26.1)	114(28.6)	41(10.3)	18(4.5)	3.68	9
4	The resources on the library website have a reputable organization or expert backing it	259(65.1)	125(31.4)	7(1.8)	7(1.8)	0(0)	4.60	2
5	The information presented on the library website is reliable and it was scholarly written	220(55.3)	166(41.7)	13(3)	0(0)	0(0)	4.53	3
6	The materials on the website are useful, unique and accurate	245(61.6)	117(29.4)	29(7.3)	1(0.3)	6(1.5)	4.49	5
7	The information presented on the library website are derivative, repetitious and doubtful	42(10.6)	21(5.3)	31(7.8)	136(34.2)	168(42.2)	2.08	10
8	The library website includes search features	294(62.6)	125(31.4)	24(6)	0(0)	0(0)	5.13	1
9	Information is up-to-date	194(48.7)	170(42.7)	34(8.5)	0(0)	0(0)	4.40	7
10	Abbreviations and acronyms are spelled out and explained	162(40.7)	160(40.2)	70(17.6)	6(1.5)	0(0)	4.20	8
	Variables Mean Score (VMS)						4.21	

Source: Field Survey

Table 3 shows the respondents' assessment of the content qualities of their university library website. The Variables Mean Score (VMS) for the ten variables on content quality is 4.21, most variables score mean above the VMS, aside contacts of authors for subject clarification, library website

being derivative as well as abbreviation or acronyms been spelled and explained that score means below the VMS. The library website having a search feature has the highest mean score of 5.13 while information on the website being derivative has the least mean score, 2.08.

Table 4: Aesthetics Designs of Library Websites

S/N	Qualities	SA F (%)	A F (%)	U F (%)	D F (%)	SD F (%)	Mean	Ranking
1	There are clear navigation tools on all pages of the university library website	211(53)	134(33.7)	53(13.3)	0(0)	0(0)	4.40	1
2	There are navigation back to the library homepage on every page on the website	216(54.3)	100(23.1)	69(17.3)	13(3.3)	0(0)	4.30	2
3	The date of the last update was indicated on the website	39(9.8)	75(18.8)	132(33.2)	47(11.8)	105(26.4)	2.74	9
4	The size of the library name and logo are reasonable	185(46.5)	104(26.1)	102(25.6)	7(1.8)	0(0)	4.17	6
5	The font style and text formatting consistence	186(46.7)	112(28.1)	93(23.4)	7(1.8)	0(0)	4.20	4
6	The graphic design feels good and not cluttered	186(46.7)	103(25.9)	102(25.6)	7(1.8)	0(0)	4.18	5
7	Headings and titles are user-friendly	208(52.3)	101(25.4)	70(17.6)	19(4.8)	0(0)	4.25	3
8	The library website is accessible via all browser	109(27.4)	107(26.9)	99(24.9)	58(14.6)	25(6.3)	3.55	7
9	All images, icons and graphics paint when the website page loads	84(21.1)	105(26.4)	115(28.9)	77(19.3)	17(4.3)	3.41	8
	Variables Mean Score						3.91	

Source: Field Survey

Table 4 present the university library website's aesthetic features from the users' perspective. The Variable Mean Score (VMS) for the nine variables used to measure library website aesthetic features is 3.91 and most variables scored mean above the VMS benchmark. Feature such as date of the last update, library website being browsers' friendly as well as graphics, icon, images and animation loading fast with ease score below the total mean score. The library website having an easy navigational tool score the highest mean score of 4.40 while the indication of the date of the last update scores the least mean score of 2.74.

Everyday	16	4
Almost every day	71	17.8
Weekly	85	21.4
Fortnightly	68	17.1
Monthly	116	29.1
Not at all	42	10.6

Total	398	100
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Source: Field Survey

Table 5: Library Website Utilization

	Frequency	Percentage
With your experience with your university library, would you say it is usable?		
Yes	381	95.7
No	17	4.3
Total	398	100
How often do you use the library website?		
Very Often	35	8.8
Often	148	37.2
Occasionally	179	45
Not Using	36	9
Total	398	100

How often do you download materials on the site?

Table 5 present the level of university library website utilization. Respondents are asked if they find their library website usable, the vast majority, which constitutes 381 (95.7) affirmed that they find it serviceable while 17 (4.3%) opinion differs. On how often respondents browse the library website, 35 (8.8%) of the respondents professed they use it very often, 148 (37.2%) use it often, 179 (45%) use it occasionally and 36 (9%) confirmed they have not been using the website. This implies that the majority of users are using the library website but not habitual. On how often respondents download material from the library database, 16 (4%) of the respondents confirmed they download materials every day, 71 (17.8%) almost every day, 85 (21.4%) weekly, 68 (17.1%) fortnightly, 116 (29.1%) monthly and 42 (10.6) not at all. Yes, most users are downloading materials from the library website but it is obvious they have other sources of information as the majority upheld, they download almost every month.

Table 6: Challenges Militating against Optimal Utilization of the Library Websites

S/N	Quality	SA F (%)	A F (%)	U F (%)	D F (%)	SD F (%)	Mean	Ranking
1	Lack of technological know-how	178(44.7)	96(24.1)	79(19.8)	32(8)	13(3.3)	3.99	1
2	Lack of evaluation checklist for quality assurance	127(31.9)	156(39.2)	75(18.8)	25(6.3)	15(3.8)	3.89	2
3	Lack of provision for library staff training and development	143(35.9)	74(18.6)	141(35.4)	32(8)	8(2)	3.78	3
4	Absence of sufficient budget and funding for the library	103(25.9)	89(22.4)	143(35.9)	35(8.8)	28(7.1)	3.51	4
5	The negative attitude of the school and library management	67(16.8)	130(32.7)	141(35.4)	39(9.8)	21(5.3)	3.46	5
	Variables Mean Score						3.73	

Source: Field Survey

Table 6 illustrates the challenges militating against the realization of the effective and functional library website. The Variables Means Score (VMS) for the five variables used to measure challenges is 3.73. Lack of technological knowledge record the highest means score of 3.99 followed by the absence of evaluation criteria for quality assurance with a mean score of 3.89 as well as inadequate provision for staff training and development, with a mean score of 3.78. Inadequate budgetary allocation and negative perception of the library on the part of the management scored mean below the VMS benchmark. Management's negative perception of the library scores the least mean score, 3.46.

7. DISCUSSION OF FINDINGS

Findings from the study revealed that more emphasis is placed on aesthetic design than the information content of the library website since search features ranked even better than the website having sufficient information. It substantiates the report of the study that recorded a shortfall of content quality in Nigerian library websites (Utulu and Bolariwa, 2012). It also corroborates with study of determinants and impacts of aesthetics in users' first interaction (Jiang et al., 2016). It is in partial agreement with study that pointed out that beginners rely on aesthetics features while experts/researchers did not only rely on appearance feel but commit to information accuracy of the website (Ahmad et al., 2011). This study contradicts the report of study that indicated an emphasis on content quality (Farajpahlou and Saberi's, 2009). The reason for this disparity might be the difference in expert knowledge of handlers or content managers of those university library websites couple with the financial strength of each library that is not the same.

University of Ibadan (Kenneth Dike) library website ranked highest in richness of content quality followed by the Covenant University library website. In terms of aesthetic features, Covenant University Library, Federal University Oye-Ekiti and Ekiti State University library website ranked very high. None of the understudies' library websites has features for advert placement, frequently asked questions (FAQ) and a list of new arrivals. On the content quality of the library websites understudy, search features, scholarly reputation of content, reliability of the information on the library websites as well as the usefulness of the website information record high rating from users among other variables. Findings on aesthetic features on the university library websites illustrated the presence of navigational tools, user's friendly headings and titles, font style and text formatting, as well as graphic design.

This result is very similar to study of content and design features of academic health sciences libraries' homepages where features such as contact addresses, ask a librarian (virtual reference desk), feedback and suggesting a link, subject guide, search tools, web 2.0 tools, years of the last update as well as responsive web design are reported to be available content and design feature on the library websites (McConnaughy and Wilson, 2018). Findings on library website usability indicated that most respondents (undergraduates) find the library website to be impactful and yet utilization has not reached the optimal stage, as most users occasionally browse the library website. On challenges underpinning utilization of library website, the verdict has it that lack of technological knowledge, absence of a standard for quality assurance and inadequate provision for staff training and development constitute a major bottleneck while funding and negative attitude of the school and that of library management seems not to be a major problem.

8. CONCLUSION

The web plays an important role in the development of various domains and fields of human endeavors that even extend to library operations via web-based information services. The library website has tremendous benefits, as patrons have remote and quick access to information. This evidence could be seen in university libraries all over, as they are on the verge of keeping up with the pace of the new digital revolution. This is to say that the great impact of library services are now being felt on the internet. Academic libraries are developing a library website for easy and virtual accessibility of information resources. This development left

library management with the responsibility of ensuring that the library website meets the usability view of users. Hence, university libraries ought to ensure that their library websites aesthetic designs, as well as that of content management of the information, left users with the impression feel of returning to use the library over and over again. Usability evaluation of a library website ensures good usage and accessibility of information, it enriches the overall quality of the library website and also determines users' acceptance. Going by the report of the current study, the fundamental objective of integrating library websites into the university library system has not been fully attained, as there is still a need for improvement in their web-based information services. Search bar linking to relevant scholarly publication are prominent in all library websites under investigation, more so navigational tools that ensure easy navigation of the library websites are rightly visible on the library websites, but in general, the library websites are found to be useful but yet to be optimally utilized by the users due to absence of some content and aesthetic features that tend to improve the usability and visibility of the library website on the cyberspace.

RECOMMENDATIONS

Based on the report of findings, the following recommendations are proffered:

1. Quality assurance should be put in place and more so be consistently deployed for evaluation of library website usability;
2. University libraries should ensure the list of new arrivals is constantly published on the library website for users' awareness and accessibility.
3. University library management should ensure the library website meets a high quality of an ideal website at the planning, design and implementation stage.
4. The University library websites should be systematically developed with accurate and up to date information to fulfill the information requirements of the clientele.
5. Library management should embrace digital marketing of information products, which foster collaboration and generate additional funds for the library.
6. University library management should publicize among users the importance and usefulness of the library website through publicity and user education.
7. University libraries also need to improve their presence online and as well as add features that will engage and elicit feedback from users.
8. University library management should make provision for adequate staff training and development for library staff to improve their level of competencies and technological knowledge on web development.

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