

# Interactivity, usability and aesthetic as predictors of undergraduates' preference for university library websites

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*The study examined interactivity, usability and aesthetics as predictors of undergraduates' preference for university library websites. A total of 134 final year undergraduates registered for a course in Web Design and Management from two departments in two different universities represented the sample for the study. A researcher-designed questionnaire was used to gather data from the respondents which were analysed to test the three developed hypotheses. The results suggest that all three factors correlate with preference for university library websites. The students' perceptions and ratings of interactivity versus usability and interactivity with aesthetics were low. The three independent variables (interactivity, usability and aesthetics) jointly explained 51% of the variations in the preference for university library websites. Each of the features makes significant contributions to the prediction of university website preference. All the factors are significant to the prediction of preference for university library websites. The results call for the improvement of interactivity in order to have high correlation with usability and aesthetics and thereby increasing the preference by users for university library websites.*

**Keywords:** Interactivity, usability, aesthetic, undergraduates, university library websites, website patronage, website access

## 1 Introduction

Universities the world over now take creation, development and management of websites very seriously. Their websites showcase them to the whole world. Likewise, the university library website represents the library's virtual presence to the world (Liu 2008). Aside from the fact that university library websites provide information about the services that libraries render, they make provision for access to information through online catalogues, electronic databases, subject gateways, instructional materials, tutorials and more. Information on most academic library websites is tailored towards the vision and mission of the academic institutions of which the libraries are a part as the libraries are the gateways to information that support institutional academic staff and students in research and learning. As emphasised by Liu (2008: 6) and Schmutz, Sonderegger and Sauer (2018), most academic library websites are inventories and access points for such information. As the massive growth of internet resources and new searching and sharing tools such as Google, Facebook, LinkedIn, Instagram, WhatsApp, YouTube and others give users more power, ease and fun in information seeking, academic library websites face stiff competition in the area of user preference, despite providing considerably better scholarly information.

It has been observed that a library website should meet users' preferences for and expectations of information seeking and access to information by being appropriately conceived, designed and developed (Sitbon 2020). While much assessment has been done on website preference from a content usage standpoint, there have been fewer studies examining users' preferences for library websites. There are various factors that could determine the preference for a library website. These range from the way the website is designed (aesthetics, interface, interactivity, visual appeal) to the content quality, ease of use (access and navigational links) and usability, among others. Available literature has focused on measuring the use of and preference for library space (Webb, Schaller and Hunley 2008), student preferences in terms of library website vocabulary (Polger 2011) and understanding users' preferences for and expectations of online help (Zhang, Stonebraker & Promann 2016). Studies that focus on predictors of preference for library websites, particularly by undergraduate users, seem to have been ignored. Additionally, limited empirical evidence is available from the context of Africa on preferences for library websites. It is against this backdrop that the present study seeks to examine interactivity, usability and aesthetics as predictors of university library website use by undergraduate students in some selected universities in Kwara State, Nigeria. It is expected that the outcomes from the study will result in further development and

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improvement of university library websites, not only in Kwara State, Nigeria, but generally in other universities in Nigeria and in Africa as a whole.

## 2 Objectives of the study

The main objective of the study was to examine interactivity, usability and aesthetics as predictors of use of university library websites by undergraduate students in some selected universities in Kwara State, Nigeria. The specific objectives of the study were to:

- Establish relationships between interactivity and preference for university library websites by undergraduate students.
- Determine the relationship between usability and preference for university library websites.
- Ascertain whether or not aesthetics can determine the preference for a university library website by undergraduate students.
- Discover the joint contribution of interactivity, usability and aesthetics to the prediction of preference for university library websites by undergraduate students.

## 3 Literature review

This section features a review of relevant literature on the variables of the study which are: website interactivity, website usability, website aesthetic (the independent variables) and website preference (the dependent variable).

### 3.1 Website preference

Library website preferences are determined by factors such as the patronage, use and acceptance of library websites. 'Preference' in this study means a greater liking for one alternative over others, that is, the preference for one library website over other websites. It is assumed that users will prefer a library website if the site is able to satisfy their informational needs, if it has good navigational links that make it interactive, and if the website appeals to users in terms of colour and design. There are a number of studies that have explored how initial judgments on first interactions with a university library website are made and the factors that determine these judgements; so, also, factors that determine preference for library websites are available (Webb, Schaller & Hunley 2008, Polger 2011, Zhang, Stonebraker & Promann 2016, Schmutz, Sonderegger & Sauer 2017, Schmutz, Sonderegger & Sauer 2019). Factors that determine preference for library websites include, but are not limited to, interactivity, aesthetic, visual appeal, accessibility/navigability, content/information quality, usability and prototypicality. Since all of these factors cannot be investigated in a single study, this study is delimited to just three of the factors: interactivity, usability and aesthetics. These three were chosen because it was observed from the literature that there are limited reports or empirical evidence on any of the three that focus on evaluation of university library websites and that are from the context of information systems research in Africa.

### 3.2 Interactivity

As indicated by Neelotpaul (2011: 15), interactivity is consequent on a negotiation between the website and users globally and over a period of time. Interactivity creates a strong connection between user and website and can result in a satisfying experience on the part of the user. Lowry et al. (2006) was of the opinion that interactivity can improve website satisfaction. Jiang et al. (2010) explained that websites that reflect user control features can influence cognitive and affective involvement. Jiang et al. (2010) went further to say that websites with corresponding communication usually lead to effective involvement for functional websites. Website interactivity is also a vital contributing factor for brand knowledge components, namely brand awareness (Keng & Lin 2006, Isaias & Blashki 2020) and brand image (Müller & Chandon 2004). Neelotpaul (2011) indicated that the incorporation of interactivity into brands' websites has helped companies in successful online branding. Theoretically, the concept of website interactivity deals with the basis of engagement and attraction that can be interpreted as a natural characteristic in technology-mediated communication and human computer interaction (Chen & Yen 2004). Website interactivity does not only allow users to interact with brands and other customers but also enables them to create their own content on user-generated platforms leading to a more cooperative method of branding. Website interactivity has become a workable way of advancing the communication value of brand websites (de Chernatony 2010) and has been referred to as the interaction between users, between the system and the user, and between the message and the user (Liu & Shrum 2002, Lee, Park & Wise 2013).

As pointed out by Liu (2008), people generally assume interactivity to be a desirable feature for a website, but research on interactivity has produced ambiguous results. Some studies have shown that users can form reliable judgments base on first interactions immediately and this judgment is consequent on factors such as context or visual complexity (Touch et al. 2012). Other studies have confirmed the positive impact of interactivity on users' responses to the website such as their attitude toward the website (Yoo & Stout 2001), while others have found negative effects of interactivity on website visits

(Coyle & Thorson 2001). All of these studies suggest that the mixed results may be partly due to the lack of a uniform idea of what interactivity is. Different understandings of what interactivity is has led to the manipulation of the construct in various ways (for example, Liu & Shrum 2002). As observed from the literature, there have been no conclusive results about how interactivity influences website preference. Therefore, this study hypothesises ( $H_1$ ) that: undergraduates' perception of interactivity will not significantly predict undergraduates' preference for university library websites.

### 3.3 Usability

Designers and researchers have assumed that usability is the rationale behind users' active involvement with a website (Reinecke et al. 2013). From the literature, usability is regarded as a key variable affecting quality perceptions. Though very difficult to define, some authors have made an attempt. For instance, Brinck, Gergle and Wood (2002) considered usability to include websites that have correct functionality, are efficient to use, are easy to learn and remember, are error tolerant, and are subjectively pleasing, while Oulanov and Pajarillo (2002) postulated that efficiency, helpfulness and adaptability are usability attributes. In his usability test study, Lee (2004) adopted multiple usability criteria such as usefulness, effectiveness, satisfaction, supportiveness, and intuitiveness. Shackel (1991) described usability as a technology's capability used easily and effectively by the specified range of users, given specified training and user support to fulfil the specified range of tasks within the specified range of environmental scenarios. Usability refers to terms such as ease of use and ease of learning that imply providing users with systems requiring minimum cognitive and physical effort to satisfy their needs and expectations (Sindhuja & Surajith 2009, Baumgartner, Sonderegger & Sauer 2019) As argued by Powell (2000), website usability is the extent to which a site can be used by a specified group of users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use. In other words, website usability is a test of the success of a website user in performing a task on the website (Yusof et. al. 2010). As indicated by Mentis and Turan (2012), usability of a library website is central to establishing a healthy communication between the university and its stakeholders. Therefore, it is assumed that healthy communication between university library management and stakeholders can contribute to the governance and management of the university library website in many ways. Similarly, a well-managed library website with high usability can stimulate a healthy dialogue between the university library and its users. It can do so because dialogue plays a central role in communication (Gutierrez-Garcia 2008).

Literature has revealed some relevant studies on usability of websites. For example, Mentis and Turan (2012) evaluated and explored the usability level of Namik Kemal University (NKU) website and provided guidance to develop more usable websites. Their research hypotheses identified six different factors positively associated with website usability. The results revealed that five of the six factors positively and significantly affected the website usability perceptions of NKU members. Results also revealed that some of the demographic factors tested, such as gender and web experience, have significant impacts on usability perceptions of individual users. Furthermore, the study discussed the potential benefits of improved website usability on governance and proposed ways to improve the usability of websites. Joo, Lin and Liu (2011) developed a usability evaluation model in the context of academic libraries. Their study not only proposed the usability evaluation model but also a practical survey tool tailored to academic library websites. The authors verified the reliability and validity of the usability evaluation model empirically using the survey data from actual users. Statistical analyses, such as descriptive statistics, an internal consistency test and a factor analysis, were applied to ensure both the reliability and validity of the website preference evaluation tool. From the document analysis and expert consultation, the study (Joo, Lin and Liu 2011) identified eighteen measurement items to survey the constructs of usability, effectiveness, efficiency and learnability in academic library websites. The tool was then validated with regard to data distribution, reliability, and validity. The results proved the evaluation tool as effective thereby suggesting its acceptance in assessing academic library website usability.

Hammill (2003) evaluated the usability of the Florida International University (FIU) Libraries website based on multiple evaluation categories such as navigation, clarity of vocabulary, and visibility of the website. Using a usability test and post-hoc questionnaire, the author measured how efficiently participants used the FIU Libraries' website and the extent of their satisfaction. It was suggested that, besides quantitative measures of efficiency, like number of clicks to complete each task, a qualitative analysis based on users' comments and open questions could also determine usability. In a similar vein, Lee (2004) tested the usability of a research centre library website in Korea. A mixed methods approach involving observation and usability tests in addition to heuristic evaluation and laboratory usability testing, as well as remote usability testing, were adopted. It was discovered that there were user interface problems in the system. The study also identified library website improvement strategies. Jeng's usability model (2006) identified four constructs and sub-attributes of usability from reviews of previous representative usability models and suggested specific measures for each construct. Evaluation studies of university library websites are rare in Nigeria and Africa as a whole despite the fact that extant literature has claimed usability to be an important factor that could lead to preference for a university library website. It is on this note that this study

hypothesises (H<sub>2</sub>) that: undergraduates' perception of usability will not significantly predict undergraduates' preference for university library websites.

### 3.4 Aesthetics

Aesthetics is the science of philosophy that deals with the nature of beauty, art and taste as well as with the creation and appreciation of beauty (Brady 2013, Thielsch, Haines & Flacke 2019).). It is also about how things are known through senses. On this note, it is assumed that, for a library website to be effective, there must be a balance between content and design. This was why Lavie and Tractinsky (2004) postulated that aesthetics generally refers to beauty. The beauty, according to them, is commonly applied to things that are pleasing to the senses, to the imagination or to our understanding. In the light of this, aesthetics in this study is understood to mean a beautiful or pleasing appearance of a university library website. What is beautiful may be appealing and therefore preferred. A website must be aesthetically agreeable (Polger 2011). It has been observed that aesthetic response to products and the spontaneous emotional reaction based on visual preferences seem to influence the preference for a product (library website) heavily (Sonderegger & Sauer 2010, Reinecke et al. 2013). This aesthetic response or reaction is not only consequent to judgments about websites, it can also influence them in an interaction that Reinecke et al. (2013) referred to as the "halo effect": websites that are perceived as beautiful are also perceived as usable (Reinecke & Bernstein 2011) and trustworthy too (Lindgaard et al. 2011) and, based on these, users will consequently have a preference for such websites. Since users make reliable judgments within the first fifty to 500 milliseconds (Tractinsky et al. 2006), it is assumed, in this study, that employing low-level image statistics of static website screenshots may likely predict whether a user will like or prefer one site more than another. On this note, therefore, this study postulated that website aesthetics will affect or determine the users' preference for such sites. Therefore, the study hypothesises (H<sub>3</sub>) that: undergraduates' aesthetic perception will not significantly predict undergraduates' preference for university library websites. Based on H<sub>1</sub>, H<sub>2</sub> and H<sub>3</sub>, the research model (Figure 1) for the study was developed.

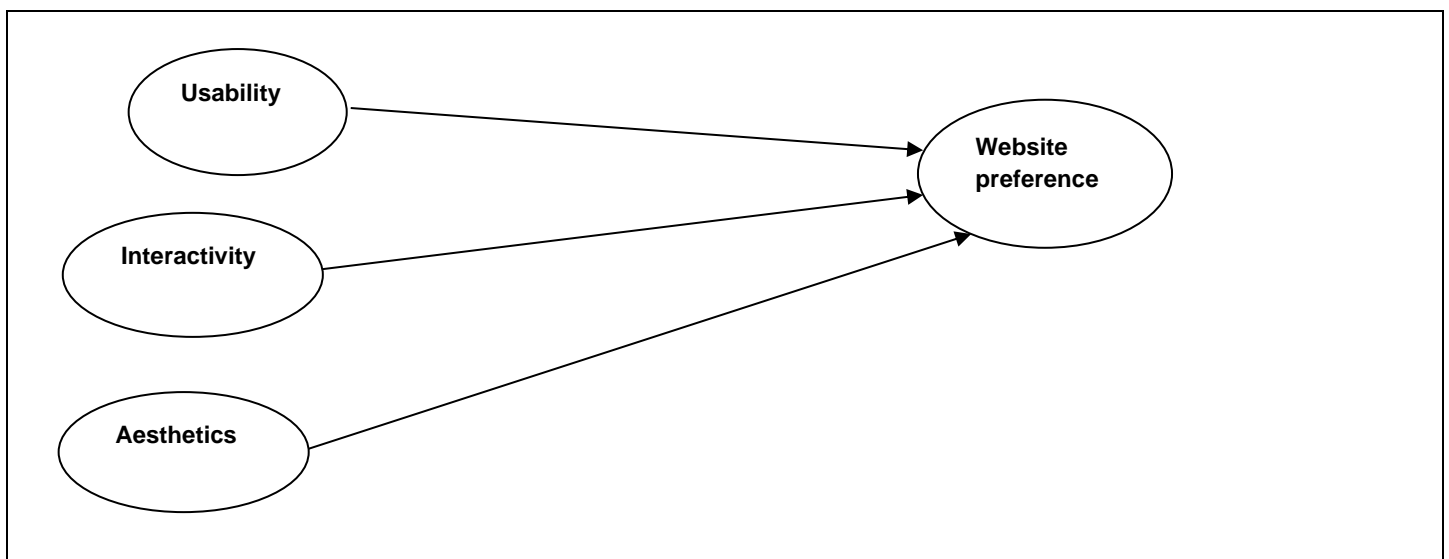


Figure 1 The conceptual model for the study

## 5 Methodology

The design used to carry out this study was a survey. Perusal of some library and information science studies revealed that surveys are commonly used in library and information science or information system research to collect self-reported data from study participants. Survey design was considered appropriate in this study because it allows the researcher to reach a substantial percentage of respondents (students) in the university departments that were covered in the study. Survey design was adopted because it was prominently used in previous related studies (Voorveld, van Noort & Duijn 2013, Jiang et al. 2016, Tella 2019). Two departments from two universities in Kwara State, Nigeria, were involved in the study. They were the Department of Library and Information Science at the University of Ilorin and the Department of Library and Information Science, Kwara State University, Malete, Ilorin. The two departments from the two universities were involved because the researcher currently teaches the course Web Design and Management in one and is an adjunct lecturer in the other. The web design and management course is a two-credit unit that teaches students how to design a website, how to plan a successful website design/development project, and about the processes involved in creating a website, the most cost-effective ways of maintaining and developing a website, what makes a successful website and how to recognise, discuss and critique the individual elements of a website, among others.

The population of the study included all Year Four undergraduate students in the two Library and Information Science (LIS) departments. Students from Year Four were selected because they have completed the course on web design and management and would therefore be the best respondents to the items in the data collection instrument. The total enumerative sampling method was adopted due to the small size of the sample of students in the participating departments. Total enumeration or census survey is a study of every unit, everyone, or everything, in a population. According to Babbie (2013), if a study population is small, it may be preferable to do a census of everyone in the population, rather than take a sample. A census is attractive for a small population for the sake of precision, confidence levels and variability (Kothari 2013, Creswell 2014). It has a high level of accuracy and provides complete statistical coverage. The researcher therefore sampled all 187 fourth-year undergraduates from the two departments covered in the study. Table 1 represents the demographic distribution of respondents from the study.

**Table 1: Demographic distribution of respondents**

<b>Demographics</b>	<b>Frequency</b>	<b>%</b>
<b>Gender</b>		
Male	63	47
Female	71	53
Total	134	100
<b>Age</b>		
21-25 years	118	88
26-30 years	10	7.5
31-35 years	6	4.5
36 years +	0	0
<b>Total</b>	<b>134</b>	<b>100</b>
<b>Institution</b>		
University of Ilorin	73	54.5
Kwara State University	61	45.5
<b>Total</b>	<b>134</b>	<b>100</b>

The research instrument used for data collection in the study was a questionnaire with closed-ended questions whose items were adapted from previous related studies. Section one of the questionnaire focused on demographic characteristics of the respondents. Section two was sub-divided into parts I-IV, each section targeting data on the predictors of the study: interactivity, usability and aesthetics and the criterion, preference. Eight items on website interactivity were adapted from eighteen items measuring perceived interactivity by McMillan and Hwang (2002). The section on usability contained five items adapted from Sauro (2015), while the five items on aesthetics were adapted from Thielsch & Moshagen (2015) and Song and Zinkhan (2003). The six items on website preference were informed by the literature. All twenty-four items in the questionnaire were measured on a five-point Likert scale, from 5 (strongly agree) to 1 (strongly disagree).

To ensure the validity of the instrument used in the study, it was given to two experts whose research areas include web design and management and information systems evaluation. Their comments and suggestions led to the modification of the instrument, thereby authenticating its face and content validity. The reliability of the instrument used was ensured through a test-re-test reliability method of a two-week interval. The responses collected were subjected to Cronbach's alpha. The coefficient alpha reliability for each of the sub-scale of the questionnaire are as follows: interactivity (8 items)  $r = 0.95$ ; usability (5 items)  $r = 0.98$ ; website aesthetics (5 items)  $r = 0.87$ ; and the criterion variable, website preference, with six items, returned an  $r = 0.93$ . The overall reliability co-efficient of the twenty-four item instrument reported an  $r = 0.93$  Cronbach's alpha. This high reliability confirmed the adequacy of the instrument for data collection in the study.

Prior to the administration of the instrument, the participants in this study were given two weeks to navigate each other's university library website and observe all that had been discussed in class. Thereafter, the copies of the questionnaire were administered. Participation in the study was voluntary but eventually no one indicated intention to opt out because they found the exercise interesting and educational. As it involved a practical demonstration of what is learnt in class, they were all willing to associate with the study. The instructions given to the respondents at the commencement of the administration of the study made the exercise a very easy one. The exercise was carried out on two different occasions during a lesson of the Web Design and Management course in the fourth-year undergraduate bachelor's degree programme in LIS at both institutions. The data were captured during the first semester 2018/19 academic session. The entire population of 134

students were administered the questionnaire. All the 134 copies of the instrument were properly completed and useful for data analysis, giving a 100% return rate. Descriptive and inferential statistics including percentage, correlation and multiple regression analysis were used to analyse the data. Pearson's correlation coefficient was used to examine the relationships between the dependent variable (preference for university library website) with the independent variables (interactivity, usability and aesthetics) while regression analysis was used to discover the contribution of the independent variables to the dependent variable. A statistical package for social sciences (SPSS 21.0) was used for the coding of the collected data.

## 6 Results

This section presents the results obtained from the analysis conducted on the four objectives and variables of the study which were interactivity, usability and aesthetics (independent variables) and preference (dependent variable). The analysis was conducted to discover the relationship between the three independent variables and the dependent variable.

### 6.1 Interactivity and website preference

Table 2 shows the relationship between interactivity and preference for university library websites based on the 134 respondents. The data show the absolute value equal to 0.93 which is considered a positive relationship. This correlation suggests that the two variables have a strong tendency to vary, and thereby indicates that there is a significant relationship between interactivity and preference for a university library website. The values in the table ( $r = 0.93$  and  $p < 0.05$ ) suggest that the more interactive a university library website, the more the users prefer such a website.

**Table 2: Interactivity and preference for university library website**

Variables	Pearson correlation co-efficient	P-value	Remark
Website interactivity	0.93	0.5	S**
Website preference			

### 6.2 Usability and website preference

Table 3 shows the relationship between usability and preference for university library websites based on the 134 respondents. The data show the absolute value equal to 0.91 which is considered a positive relationship. The two variables therefore have a strong tendency to vary, indicating that there is a significant relationship between usability features and the preference for a university library website. The values in the table ( $r = 0.91$  and  $p < 0.05$ ) suggest that the more the features of a university library website are usable, the more the users prefer such a website.

**Table 3: Usability and preference for university library website**

Variables	Pearson correlation co-efficient	P-value	Remark
Website usability	0.91	0.5	S**
Website preference			

### 6.3 Aesthetics and website preference

Table 4 shows the relationship between aesthetics and preference for university library websites based on the 134 respondents. The data show the absolute value equal to 0.93 which is considered a positive relationship. The two variables have a strong tendency to vary, indicating that there is a significant relationship between aesthetics and the preference for a university library website. The values in the table ( $r = 0.87$  and  $p < 0.05$ ) suggest that the aesthetic of a university library website has the capacity to influence the preference for the website by users.

**Table 4: Aesthetics and preference for university library website**

Variables	Pearson correlation co-efficient	P-value	Remark
Website aesthetics	0.87	0.5	S**
Website preference			

### 6.4 Interactivity, usability, aesthetics and preference for university library

Table 5 reveals that relationships exist between the entire website preference score and the other related predictors of preference for university library websites. The results show that interactivity had the highest correlation with preference ( $r$

= 0.89), followed by usability ( $r = 0.87$ ). A correlation of the third factor, website aesthetic, reveals  $r = 0.86$ , suggesting that all three factors correlate with library preference for university library websites. Nevertheless, the results reveal that some correlations are higher than others. Among the highest inter-correlations (higher than 0.5) are interactivity with usability ( $r = 0.56$ ) and usability with aesthetics ( $r = 0.61$ ), while interactivity with aesthetics is  $r = 0.50$ . These high correlations are not surprising considering that the perception of the interactive nature of a website, how usable the website is and the aesthetic of the websites will all prompt users to have a preference for a website that possesses all the factors and features. Some factors had much lower inter-correlations with one another: interactivity with usability ( $r = 0.56$ ) and interactivity with aesthetics ( $r = 0.5$ ). The results indicate that students' perceptions and ratings of interactivity/usability and interactivity with aesthetics were low. This explains why these features are also weakly correlated with usability as reflected in Table 5.

**Table 5: Descriptive and inter-correlational matrix among website preference predictors**

Factors	Mean	Std dev.	Lib web preference	Interactivity	Usability	Aesthetics
Library website preference	23.51	16.45	1.000			
Interactivity	18.22	10.21	0.888	1.000		
Usability	16.44	8.18	0.867	0.561	1.000	
Aesthetics	16.38	8.02	0.858	0.502	0.614	1.000

### 6.5 Model summary

Table 6a presents the results of the regression of university websites preference on the three preference predictors-related variables/features. The regression results show an adjusted R-squared value of 0.523 (Table 6a) and an F-ratio of 50.83 (Table 6b), the latter of which is significant at 0.05 level ( $0.000 < 0.05$ ). These results indicate that the three independent variables (interactivity, usability and aesthetics) jointly (as indicated by the R-squared value) explained or predicted 51.1% of the variations in the preference for university library websites. The prediction is also significant, as indicated by the F-ratio. Table 6c provides information on the individual contributions of each of the three features in predicting preference for a university library website. The results show, firstly, that each of the features make significant contributions to the prediction (as indicated by the significance of the t-values, which are greater than 0.05, as shown in the right-hand column of Table 6c). Secondly, the standardised coefficients (Beta values), which indicate relative strength of each feature in the prediction of preference for a library website, show that interactivity contributed the most to the prediction of website preference (Beta value = 0.318), followed by usability (Beta = 0.244) and aesthetics (Beta = 0.226). These results imply that all the predictors/factors exert significant contribution to the prediction of preference for university library websites.

**Table 6a: Regression of university library websites preference related factors (N=134)**

Multiple R	0.646
R-squared	0.511
Adjusted R-squared	0.501
Std. Error of the estimate	4.634
Log-likelihood function value	-1510.117

**Table 6b: ANOVA of university library websites preference related factors (N=134)**

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	13120.155	3	4,373.385 86.032	50.83	0
Residual	11270.271	131			
Total	24,390.426	134			

**Table 6c: Coefficients**

	Unstandardised coefficients		Standardised coefficients		T	Sig.
	B	Std. Error	Beta	Std. Error		
<b>Preference (constant)</b>	-0.759	0.877		0.059	-0.988	0.368
<b>Interactivity</b>	0.552	0.080	0.318	0.053	8.18	0
<b>Usability</b>	0.449	0.079	0.244	0.048	4.66	0
<b>Aesthetics</b>	0.437	0.070	0.226	0.043	5.52	0

## 7 Discussion of findings

The results suggest that all three factors correlate with preference for university library websites. This is not a coincidence following the earlier explanation that the three predictive factors are important. Some studies have confirmed the positive impact of interactivity on users' response such as attitude toward websites (Yoo & Stout 2001); other studies have found little or even a negative effect of interactivity (Coyle and Thorson 2001). Similarly, other studies have indicated the significance of usability and aesthetics as they determine preference for and judgment of websites; university library websites are no exception. For instance, Mentis and Turan (2012) indicated that usability of the website plays a central role in establishing a healthy communication between the university and its stakeholders. Tella (2019) also emphasised that, for a library website to be effective, there must be a balance between content and design. The effectiveness of a website can make the users prefer the site over others.

The results indicate that the students' perceptions and ratings of interactivity/usability and interactivity with aesthetics were low. Though the rating is low, it is a little above average. The result confirms the finding of Jiang et al. (2016), that websites with reciprocal communication result in effective involvement for functional brands. Similarly, website interactivity has been referred to as a vital contributing factor of brand knowledge components, namely brand awareness (Keng & Lin 2006) and brand image (Müller & Chandon 2004). Neelotpaul (2011) indicated that "the incorporation of interactivity in brands' websites has helped companies in successful online branding". However, despite being low, the factors are considered very important when judging the preference for university websites. Notably, some studies have shown that users can form reliable judgments based on their first interaction and this judgment may be consequent on factors such as context or visual complexity (Touch et al. 2012). Similarly, as mentioned, studies have confirmed the positive impact of interactivity on users' response such as attitude toward websites (Yoo & Stout 2001), while others have found little or even a negative effect of interactivity (Coyle and Thorson 2001). All of these lend credence to the findings in this study.

The three independent variables (interactivity, usability and aesthetics) jointly explained or predicted the variations in the preference for a university library website. Each of the features makes significant contributions to the prediction of preference. All the predictors/factors exert significant contribution to the prediction of preference for a university library website. These, as well, are not coincidences. As observed from the literature, it is evident that websites with the features expected by users will be preferred over others.

## 8 Conclusion

Extant literature has revealed factors that could determine user preference for a library website. These are websites designed in terms of aesthetics, interface, interactivity, visual appeal and content quality, ease of use in terms of access and navigational links, and usability among others. Available studies only focused on library space, use, and preferences, charting a path toward increased engagement and student preferences in library website vocabulary. Studies that focus on predictors of preference for library websites, particularly by undergraduate users and in the context of Africa, are limited. The results of this study suggest that all three factors that have been studied correlate with preference for university library website. The students' perceptions and ratings of interactivity versus usability and interactivity with aesthetics were low. The three independent variables jointly explained 51% of the variations in the preference for university library websites. They are good determinants of preference for university library websites.

Based on the findings, the study recommends that interactivity features should be improved so as to have a high correlation with usability and aesthetics. Similarly, library website administrators and designers should not take it for granted that the usability and aesthetics of websites are acceptable but rather improve on them constantly since the information landscape is dynamic. The findings in this study imply that the more interactive a university library website is, the more preference undergraduate students' users will have for it and consequently increase the website's patronage. Similarly, the more usable undergraduate users find a university library website to be, the more the preference for it. A well-designed university library will likely attract users and increase preference for it. The message here is that university library websites should be designed in more interactive, usable and aesthetic ways.



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