# Social Networking Challenges and Evaluation

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## ABSTRACT

Usability is one of the major factors that determine the successfulness of a website.  It is important therefore to have certain measurement methods to assess the usability of websites.  In the context of today's electronic media, social networking sites have come to mean individuals, using the Internet and web application to communicate in previously impossible ways. This is largely the result of a culture-wide paradigm shift in the uses and possibilities of the internet itself.  This study ascertains the various categories of social networking sites used by undergraduates, to examine the extent of usage of social networking sites, purposes of using the sites, to determine the benefits of using social networking sites and to identify the dangers associated with social networking and to proffer strategies to ameliorate such dangers. The study adopted the descriptive survey research design to derive responses from a sample size of 181 undergraduate students of University of Benin who were selected via random sampling techniques. Data were collected from this population using usability evaluation questionnaire. The result of the study reveals that Facebook meets more usability criteria than Twitter, making Facebook more efficient. In addition, useful suggestions for further research were equally made.

(Keywords: usability, website, electronic media, social networking, social media, Facebook, Twitter)

## INTRODUCTION

Social networks are online services, platforms or sites that focus on building and reflecting social relations among people, who share interests and activities (Fisher, 2011). Boyd and Ellison (2007) define social networking sites as web-based services that allow individuals to construct a public or semipublic profile within a bounded system articulate a list of other users with whom they share a connection and view and traverse their list of connections and those made by others within the system. Social networks comprise a representation of each user (often a profile), his or her social links, and a variety of additional services. Most of the social networks are web-based and provide mean for their users to interact via the Internet, such as e-mail and instant messaging (Folorunso et al. 2010; Rachna, 2010).

Since their introduction, social networking websites have attracted millions of users, many of whom integrated their sites as a daily practice. These popular networking sites also have phone applications for easier access and mobility. In Nigeria, the number of social network users is on the high side. According to Social Bakers, a Facebook statistics site, Nigeria ranks 35th in the world in the number of Facebook users (Kaplan et al., 2010). According to the site, Facebook has an estimated 2 billion active users as at June 2017. As internet use in Nigeria has shot up in the last five years, so has the use and popularity of social media platforms (Onomo, 2012). Facebook has 7.2 million daily users from Nigeria with 97% of them accessing the platform via mobile platforms (Will, 2011).

Like Facebook, Twitter is an online news and social networking service where users post and interact with messages, "tweets", restricted to 140 characters. Registered users can post tweets, but those who are unregistered can only read them. Users access Twitter through its website interface, SMS or a mobile device app (Wikipedia, 2017). In 2012, more than 100 million users posted 340 million tweets a day and the service handled an average of 1.6 billion search queries per day. As of 2016, Twitter had more than 319 million monthly active users (Wikipedia, 2017). This generation tends to rely

on the net and also spends most of the time on social networking sites and apps such as Twitter, Google Plus, Instagram, Snapchat, and Facebook (Valtysson, 2010; Christian, 2012).

The main social networks are those that contain category places usually with self-description pages, and a recommendation system linked to trust. Social networking sites can also be classified based on people's areas of interest. In addition, social network can be categorized based on ownership of the websites and they are founded to achieve some specific goals which are determined by the owners.

Social networking sites are classified based on the nature of their communities, these include social news, social measuring, micro blogging, social Q&A, video, sharing, photo sharing, professional networks, niche communities, social E-mail, comment communities, broadcasting communities, blog networks, product-based, networks, presentation sharing and review and recommendation sites (Trukle, 2011; Essoungou, 2011; Idakwo, 2011).

Usability is one of the major factors that determine the successfulness of a website. It is important therefore to have certain measurement methods to assess the usability of websites. The methods could be used to help website designers make their websites more usable. This research focuses on website usability issues and implements a tool for evaluating the usability of websites, called WEBUSE (WEBsite USability Evaluation Tool).

## MATERIALS AND METHODS

### Research Model

The evaluation tool developed is called WEBUSE (Website Usability Evaluation Tool). It was developed based on the model shown in Figure 1.

The steps for evaluation are as follows:

- User selects the website to be evaluated.
- User answers the usability evaluation questionnaire.
- The user's response is sent to the WEBUSE server for processing.
- Merits are assigned according to the response (answer) for each question. The merits are then accumulated based on the four usability categories.
- Mean value for each category is considered as the usability point for that category. Overall website usability point is the mean value of usability points for the four categories.
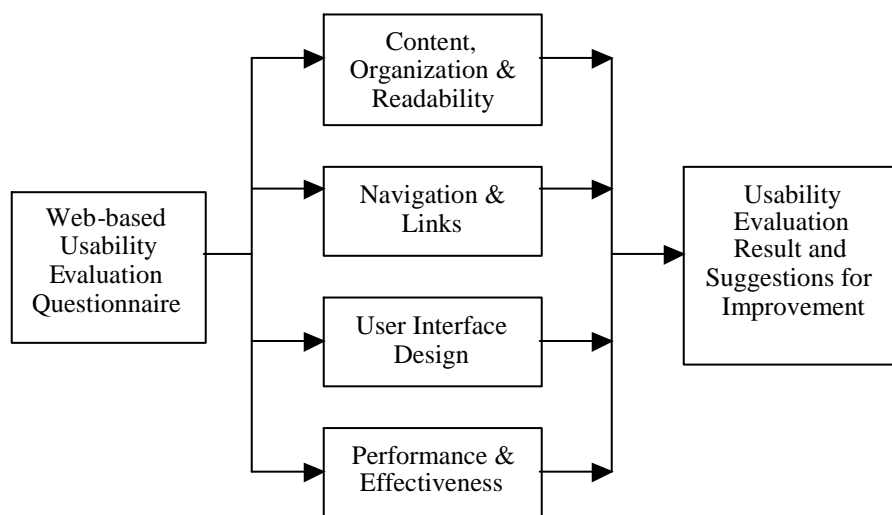- Usability level is determined by the usability points.



**Figure 1:** WEBUSE Development Model.

**Table 1:** Options for WEBUSE Questionnaire and Corresponding Merits.

| Option | Strongly Agree | Agree | Fair | Disagree | Strongly Disagree |
|--------|----------------|-------|------|----------|-------------------|
| Merit | 1.00 | 0.75 | 0.50 | 0.25 | 0.00 |

**Table 2:** Usability Points and Corresponding Usability Levels.

| Points, $x$ | 0<=x<=0.2 | 0.2<x<=0.4 | 0.4<x<=0.6 | 0.6<x<=0.8 | 0.8<x<=1.0 |
|-------------|-----------|------------|------------|------------|------------|
| Usability Level | Bad | Poor | Moderate | Good | Excellent |

Five options are available for each question. The options and corresponding merits are shown in Table 1.

Usability point for a category, $x$, is defined as:

$x$ = [ Σ(Merit for each question of the category) ] / [ number of questions ]

Table 2 shows the usability levels and the corresponding usability points.

The research population of this study comprised of students of University of Benin community. A total of 150 questionnaires were administered to undergraduate students in University of Benin, Ugbowo campus. The data collection phase was based on the use of questionnaire which was used to evaluate the use of Facebook and Twitter in University of Benin community. The questionnaire was designed to collect demographic information and also evaluate the use of Facebook and Twitter using a 5-point scale from users' perspectives. These include concept of usability, usability evaluation methods and tools. From the study, the evaluation method was determined, (i.e., a usability evaluation questionnaire) that allows the users to rate the usability of evaluated websites. Major usability evaluation criteria are then identified in order to formulate the evaluation questionnaire.

The survey questionnaire contains 42 questions which are made up of three (3) sections; section A, B, C. Section A has 4 questions which contains the background information such as gender, age and educational level of the respondents. Section B has 19 questions which were key to evaluating Facebook as a social networking site.

A 5-point scale was used in this section from 1 = strongly disagree to 5 = strongly agree. Section C also contains the same 19 questions which were also used to evaluate Twitter.

In the study, reaching the respondent using the direct contact was employed. This was done in order to reduce incomplete responses and also to ensure that as much questionnaires that was administered was gotten back. The statistical package for social science (SPSS) was employed in this research.

**RESULTS AND DISCUSSION**

**Respondents Profile**

Table 3 shows respondents' profile. Table 4 is used to determine if the site has sufficient display space. For Facebook, 50.4% and 14.5% of the respondents agreed and strongly agreed respectively. While 3.8% and 12.2% of the respondents strongly disagreed and disagreed, respectively. The remaining 19.1% chose to remain neutral. However, for Twitter, 27.5% and 19.1% of the respondents agreed and strongly agreed, respectively. While 4.6% and 9.9% of the respondents strongly disagreed and disagreed, respectively. The remaining 38.9% chose to remain neutral.

Table 5 is used to determine if it is easy to scroll left and right. Facebook analysis shows that 42.7% and 14.5% of the respondents agreed and strongly agreed, respectively. While 2.3% and 13.0% of the respondents strongly disagreed and disagreed, respectively. The remaining 27.5% chose to remain neutral. For Twitter, 34.4% and 16.0% of the respondents agreed and strongly agreed, respectively. While 3.1% and 13.7% of the respondents strongly disagreed and disagreed, respectively. The remaining 32.8% chose to remain neutral.

**Table 3:** Respondents Profile.

|  |  | N = 181 | % |
|---|---|---|---|
| **Sex** | Male | 74 | 40.9 |
|  | Female | 107 | 59.1 |
| **Age Range** | 21-25 years | 37 | 20.4 |
|  | 26 – 35 years | 88 | 48.6 |
|  | 36 – 45 years | 56 | 31.0 |
| **Education** | OND | 7 | 10.4 |
|  | Undergraduate | 39 | 58.2 |
|  | BSc | 14 | 20.9 |
|  | MSc | 5 | 7.5 |
|  | Ph.d | 2 | 3.0 |

## Facebook and Twitter Analysis (Frequency Tables)

**Table 4:** Question 1- Sufficient Display Space.

| Facebook | | | | | Twitter | | | | |
|---|---|---|---|---|---|---|---|---|---|
|  |  | Freq. | % | Valid % | Cum. % |  |  | Freq. | % | Valid % | Cum.% |
| Valid | SD | 5 | 3.8 | 3.8 | 3.8 | Valid | SD | 6 | 4.6 | 4.6 | 4.6 |
|  | D | 16 | 12.2 | 12.2 | 16.0 |  | D | 13 | 9.9 | 9.9 | 14.5 |
|  | N | 25 | 19.1 | 19.1 | 35.1 |  | N | 51 | 38.9 | 38.9 | 53.4 |
|  | A | 66 | 50.4 | 50.4 | 85.5 |  | A | 36 | 27.5 | 27.5 | 80.9 |
|  | SA | 19 | 14.5 | 14.5 | 100.0 |  | SA | 25 | 19.1 | 19.1 | 100.0 |
| Total |  | 131 | 100.0 | 100.0 |  |  |  | 131 | 100.0 | 100.0 |  |

**Table 5:** Question 2 - It is Easy to Scroll Left and Right.

| Facebook | | | | | Twitter | | | | |
|---|---|---|---|---|---|---|---|---|---|
|  |  | Freq. | % | Valid % | Cum. % |  |  | Freq. | % | Valid % | Cum.% |
| Valid | SD | 3 | 2.3 | 2.3 | 2.3 | Valid | SD | 4 | 3.1 | 3.1 | 3.1 |
|  | D | 17 | 13.0 | 13.0 | 15.3 |  | D | 18 | 13.7 | 13.7 | 16.8 |
|  | N | 36 | 27.5 | 27.5 | 42.7 |  | N | 43 | 32.8 | 32.8 | 49.6 |
|  | A | 56 | 42.7 | 42.7 | 85.5 |  | A | 45 | 34.4 | 34.4 | 84.0 |
|  | SA | 19 | 14.5 | 14.5 | 100.0 |  | SA | 21 | 16.0 | 16.0 | 100.0 |
|  | Total | 131 | 100.0 | 100.0 |  |  | Total | 131 | 100.0 | 100.0 |  |

Table 6 shows the results for accessibility. For Facebook, with respect to accessibility 34.4% and 42.0% of the respondents agreed and strongly agreed, respectively. While 5.3% and 3.8% of the respondents strongly disagreed and disagreed, respectively. The remaining 14.5% chose to remain neutral. Twitter 35.9% and 28.2% of the respondents agreed and strongly agreed, respectively. While 2.3% and 10.7% of the respondents strongly disagreed and disagreed, respectively. The remaining 22.9% chose to remain neutral.

In Table 7, Facebook evaluation of placement and content of site map or menu, reveals that 27.5% and 16.8% of the respondents agreed and strongly agreed, respectively. 37.4% chose to remain neutral. For Twitter 32.1% and 13.0% of the respondents agreed and strongly agreed, respectively. While 2.3% and 11.5% of the respondents strongly disagreed and disagreed, respectively.

**Table 6:** Question 3 - It is Accessible.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | SD | 7 | 5.3 | 5.3 | 5.3 | Valid | SD | 3 | 2.3 | 2.3 | 2.3 |
| | D | 5 | 3.8 | 3.8 | 9.2 | | D | 14 | 10.7 | 10.7 | 13.0 |
| | N | 19 | 14.5 | 14.5 | 23.7 | | N | 30 | 22.9 | 22.9 | 35.9 |
| | A | 45 | 34.4 | 34.4 | 58.0 | | A | 47 | 35.9 | 35.9 | 71.8 |
| | SA | 55 | 42.0 | 42.0 | 100.0 | | SA | 37 | 28.2 | 28.2 | 100.0 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

**Table 7:** Question 5 - Placement and Content of Site Map or Menu.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | SD | 7 | 5.3 | 5.3 | 5.3 | Valid | SD | 3 | 2.3 | 2.3 | 2.3 |
| | D | 17 | 13.0 | 13.0 | 18.3 | | D | 15 | 11.5 | 11.5 | 13.7 |
| | N | 49 | 37.4 | 37.4 | 55.7 | | N | 54 | 41.2 | 41.2 | 55.0 |
| | A | 36 | 27.5 | 27.5 | 83.2 | | A | 42 | 32.1 | 32.1 | 87.0 |
| | SA | 22 | 16.8 | 16.8 | 100.0 | | SA | 17 | 13.0 | 13.0 | 100.0 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

**Table 8:** Question 6 - Site has Information Search.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | SD | 2 | 1.5 | 1.5 | 1.5 | Valid | SD | 7 | 5.3 | 5.3 | 5.3 |
| | D | 14 | 10.7 | 10.7 | 12.2 | | D | 12 | 9.2 | 9.2 | 14.5 |
| | N | 35 | 26.7 | 26.7 | 38.9 | | N | 44 | 33.6 | 33.6 | 48.1 |
| | A | 57 | 43.5 | 43.5 | 82.4 | | A | 47 | 35.9 | 35.9 | 84.0 |
| | SA | 23 | 17.6 | 17.6 | 100.0 | | SA | 20 | 15.3 | 15.3 | 99.2 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

**Table 9:** Question 7 - Up-to-Date Information.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | SD | 4 | 3.1 | 3.1 | 3.1 | Valid | SD | 3 | 2.3 | 2.3 | 2.3 |
| | D | 16 | 12.2 | 12.2 | 15.3 | | D | 9 | 6.9 | 6.9 | 9.2 |
| | N | 33 | 25.2 | 25.2 | 40.5 | | N | 38 | 29.0 | 29.0 | 38.2 |
| | A | 52 | 39.7 | 39.7 | 80.2 | | A | 49 | 37.4 | 37.4 | 75.6 |
| | SA | 26 | 19.8 | 19.8 | 100.0 | | SA | 32 | 24.4 | 24.4 | 100.0 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

Table 8 is used to evaluate if the site has information search. In Facebook analysis 43.5% and 17.6% of the respondents agreed and strongly agreed, respectively; 1.5% and 10.7% of the respondents strongly disagreed and disagreed respectively. For Twitter, 35.9% and 15.3%

agreed and strongly agreed, respectively. While 5.3% and 9.2% of the respondents strongly disagreed and disagreed, respectively.

Table 9 is used to determine if the site has up to date information. In Facebook analysis, 39.7%

and 19.8% of the respondents agreed and strongly agreed, respectively. While 3.1% and 12.2% of the respondents strongly disagreed and disagreed, respectively. Nevertheless, for Twitter, 37.4% and 24.4% of the respondents agreed and strongly agreed, respectively.

Table 10 is used to determine if it has quick download time. For Facebook 32.1% and 13.0% of the respondents agreed and strongly agreed, respectively. While 1.5% and 16.8% of the respondents strongly disagreed and disagreed, respectively. The remaining 37.4% chose to remain neutral. For Twitter 22.9% and 20.6% of the respondents agreed and strongly agreed, respectively. While 16.0% of the respondents' disagreed, respectively.

Table 11 is used to determine if it has link colors.

For Facebook, 32.1% and 13.7% of the respondents agreed and strongly agreed, respectively. 40.5% chose to remain neutral. For Twitter, 37.4% and 16.0% of the respondents agreed and strongly agreed, respectively. 37.4% chose to remain neutral which is same percentage as those that agreed.

Table 12 is used to determine if it has a back button. For Facebook, that 45.0% and 19.1% of the respondents agreed and strongly agreed, respectively. While 6.1% and 10.7% of the respondents strongly disagreed and disagreed, respectively. The remaining 19.1% chose to remain neutral. For Twitter, 38.2% and 16.0% of the respondents agreed and strongly agreed, respectively. While 1.5% and 13.0% of the respondents strongly disagreed and disagreed, respectively.

**Table 10:** Question 8 - Quick Download Time.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | SD | 2 | 1.5 | 1.5 | 1.5 | Valid | SD | 7 | 5.3 | 5.3 | 5.3 |
| | D | 22 | 16.8 | 16.8 | 18.3 | | D | 21 | 16.0 | 16.0 | 21.4 |
| | N | 48 | 36.6 | 36.6 | 55.0 | | N | 46 | 35.1 | 35.1 | 56.5 |
| | A | 42 | 32.1 | 32.1 | 87.0 | | A | 30 | 22.9 | 22.9 | 79.4 |
| | SA | 17 | 13.0 | 13.0 | 100.0 | | SA | 27 | 20.6 | 20.6 | 100.0 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

**Table 11:** Question 9 - Link Colors.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | SD | 3 | 2.3 | 2.3 | 2.3 | Valid | SD | 3 | 2.3 | 2.3 | 2.3 |
| | D | 15 | 11.5 | 11.5 | 13.7 | | D | 9 | 6.9 | 6.9 | 9.2 |
| | N | 53 | 40.5 | 40.5 | 54.2 | | N | 49 | 37.4 | 37.4 | 46.6 |
| | A | 42 | 32.1 | 32.1 | 86.3 | | A | 49 | 37.4 | 37.4 | 84.0 |
| | SA | 18 | 13.7 | 13.7 | 100.0 | | SA | 21 | 16.0 | 16.0 | 100.0 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

**Table 12:** Question 10 - It has a Back Button.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | SD | 8 | 6.1 | 6.1 | 6.1 | Valid | SD | 2 | 1.5 | 1.5 | 1.5 |
| | D | 14 | 10.7 | 10.7 | 16.8 | | D | 17 | 13.0 | 13.0 | 14.5 |
| | N | 25 | 19.1 | 19.1 | 35.9 | | N | 41 | 31.3 | 31.3 | 45.8 |
| | A | 59 | 45.0 | 45.0 | 80.9 | | A | 50 | 38.2 | 38.2 | 84.0 |
| | SA | 25 | 19.1 | 19.1 | 100.0 | | SA | 21 | 16.0 | 16.0 | 100.0 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

Table 13 is used to evaluate if site can open new browser windows. For Facebook, 40.5% and 13.7% of the respondents agreed and strongly agreed, respectively. While 6.1% and 13.7% of the respondents strongly disagreed and disagreed, respectively. For Twitter, 35.1% and 15.3% of the respondents agreed and strongly agreed, respectively. While 6.9% and 8.4% of the respondents strongly disagreed and disagreed, respectively. The remaining 34.4% chose to remain neutral.

Table 14 is used to determine if it responds according to users' expectation, it can be clearly observed from table 14 that 39.7% and 20.6% of the respondents agreed and strongly agreed, respectively. While 5.3% and 13.7% of the respondents strongly disagreed and disagreed.

The remaining 20.6% chose to remain neutral. For Twitter, 28.2% and 22.9% of the respondents agreed and strongly agreed, respectively. While 4.6% and 9.9% of the respondents strongly disagreed and disagreed, respectively. The remaining 48.9% chose to remain neutral.

Table 15 is used to determine if Facebook and Twitter contains adverts. For Facebook, 48.1% and 23.7% of the respondents agreed and strongly agreed, respectively. While 0.0% and 5.3% of the respondents strongly disagreed and disagreed, respectively. The remaining 22.9% chose to remain neutral. For Twitter, 29.0% and 16.8% of the respondents agreed and strongly agreed, respectively. While 9.9% and 6.1% of the respondents strongly disagreed and disagreed, respectively.

**Table 13:** Question 11- Open New Browser Windows.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | SD | 8 | 6.1 | 6.1 | 6.1 | Valid | SD | 9 | 6.9 | 6.9 | 6.9 |
| | D | 18 | 13.7 | 13.7 | 19.8 | | D | 11 | 8.4 | 8.4 | 15.3 |
| | N | 34 | 26.0 | 26.0 | 45.8 | | N | 45 | 34.4 | 34.4 | 49.6 |
| | A | 53 | 40.5 | 40.5 | 86.3 | | A | 46 | 35.1 | 35.1 | 84.7 |
| | SA | 18 | 13.7 | 13.7 | 100.0 | | SA | 20 | 15.3 | 15.3 | 100.0 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

**Table 14:** Question 12 - Responds According Users' Expectations.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | SD | 7 | 5.3 | 5.3 | 5.3 | Valid | SD | 6 | 4.6 | 4.6 | 4.6 |
| | D | 18 | 13.7 | 13.7 | 19.1 | | D | 13 | 9.9 | 9.9 | 14.5 |
| | N | 27 | 20.6 | 20.6 | 39.7 | | N | 45 | 34.4 | 34.4 | 48.9 |
| | A | 52 | 39.7 | 39.7 | 79.4 | | A | 37 | 28.2 | 28.2 | 77.1 |
| | SA | 27 | 20.6 | 20.6 | 100.0 | | SA | 30 | 22.9 | 22.9 | 100.0 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

**Table 15:** Question 13 – Availability of Web Adverts.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Freq. | | % | Valid % | Cum. % | | Freq. | | % | Valid % | Cum.% | Freq. |
| Valid | SD | 0.0 | 0.0 | 0.0 | 0.0 | Valid | SD | 13 | 9.9 | 9.9 | 9.9 |
| | D | 0.7 | 5.3 | 5.3 | 5.3 | | D | 8 | 6.1 | 6.1 | 16.0 |
| | N | 30 | 22.9 | 22.9 | 28.2 | | N | 50 | 38.2 | 38.2 | 54.2 |
| | A | 63 | 48.1 | 48.1 | 76.3 | | A | 38 | 29.0 | 29.0 | 83.2 |
| | SA | 31 | 23.7 | 23.7 | 100.0 | | SA | 22 | 16.8 | 16.8 | 100.0 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

**Table 16:** Question 14 - It Follows Real World Conventions.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | SD | 2 | 1.5 | 1.5 | 1.5 | Valid | SD | 4 | 3.1 | 3.1 | 3.1 |
| | D | 10 | 7.6 | 7.6 | 9.2 | | D | 13 | 9.9 | 9.9 | 13.0 |
| | N | 31 | 23.7 | 23.7 | 32.8 | | N | 53 | 40.5 | 40.5 | 53.4 |
| | A | 63 | 48.1 | 48.1 | 80.9 | | A | 44 | 33.6 | 33.6 | 87.0 |
| | SA | 25 | 19.1 | 19.1 | 100.0 | | SA | 17 | 13.0 | 13.0 | 100.0 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

**Table 17:** Question 15 - It has Hyperlink Descriptions.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | SD | 1 | 0.8 | 0.8 | 0.8 | Valid | SD | 4 | 3.1 | 3.1 | 3.1 |
| | D | 15 | 11.5 | 11.5 | 12.2 | | D | 7 | 5.3 | 5.3 | 8.4 |
| | N | 48 | 36.6 | 36.6 | 48.9 | | N | 25 | 19.1 | 19.1 | 27.5 |
| | A | 49 | 37.4 | 37.4 | 86.3 | | A | 69 | 52.7 | 52.7 | 80.2 |
| | SA | 18 | 13.7 | 13.7 | 100.0 | | SA | 26 | 19.8 | 19.8 | 100.0 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

**Table 18:** Question 16 - It has a Consistent Design.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | D | 15 | 11.5 | 11.5 | 11.5 | Valid | SD | 3 | 2.3 | 2.3 | 2.3 |
| | N | 22 | 16.8 | 16.8 | 28.2 | | D | 8 | 6.1 | 6.1 | 8.4 |
| | A | 55 | 42.0 | 42.0 | 70.2 | | N | 37 | 28.2 | 28.2 | 36.6 |
| | SA | 39 | 29.8 | 29.8 | 100.0 | | A | 58 | 44.3 | 44.3 | 80.9 |
| | Total | 131 | 100.0 | 100.0 | | | SA | 25 | 19.1 | 19.1 | 100.0 |
| | | | | | | | Total | 131 | 100.0 | 100.0 | |

Table 16 is used to determine if it follows real world conventions. For Facebook, 48.1% and 19.1% of the respondents agreed and strongly agreed, respectively. While 1.5% and 7.6% of the respondents strongly disagreed and disagreed, respectively. For Twitter, 33.6% and 13.0% of the respondents agreed and strongly agreed, respectively. While 3.1% and 9.9% of the respondents strongly disagreed and disagreed, respectively. The remaining 40.5% chose to remain neutral.

Table 17 is used to determine if it has hyperlink description. For Facebook, 37.4% and 13.7% of the respondents agreed and strongly agreed, respectively. While 0.8% and 11.5% of the respondents strongly disagreed and disagreed,

respectively. For Twitter, 52.7% and 19.8% of the respondents agreed and strongly agreed, respectively, whereas 3.1% and 5.3% of the respondents strongly disagreed and disagreed, respectively.

Table 18 is used to determine if it has consistent design. For Facebook, it can be clearly observed from Table 18 that 42.0% and 29.8% of the respondents agreed and strongly agreed, respectively. While 0% and 11.5% of the respondents strongly disagreed and disagreed, respectively. For Twitter, 44.3% and 19.1% of the respondents agreed and strongly agreed, respectively. 28.2% chose to remain neutral.

**Table 19:** Question 17 - Good Use of Color.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | SD | 1 | .8 | .8 | .8 | Valid | SD | 2 | 1.5 | 1.5 | 1.5 |
| | D | 7 | 5.3 | 5.3 | 6.1 | | D | 11 | 8.4 | 8.4 | 9.9 |
| | N | 25 | 19.1 | 19.1 | 25.2 | | N | 37 | 28.2 | 28.2 | 38.2 |
| | A | 62 | 47.3 | 47.3 | 72.5 | | A | 47 | 35.9 | 35.9 | 74.0 |
| | SA | 36 | 27.5 | 27.5 | 100.0 | | SA | 34 | 26.0 | 26.0 | 100.0 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

**Table 20:** Question 18 - Organization of Information.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | SD | 1 | .8 | .8 | .8 | Valid | SD | 2 | 1.5 | 1.5 | 1.5 |
| | D | 9 | 6.9 | 6.9 | 7.6 | | D | 11 | 8.4 | 8.4 | 9.9 |
| | N | 33 | 25.2 | 25.2 | 32.8 | | N | 46 | 35.1 | 35.1 | 45.0 |
| | A | 60 | 45.8 | 45.8 | 78.6 | | A | 53 | 40.5 | 40.5 | 85.5 |
| | SA | 28 | 21.4 | 21.4 | 100.0 | | SA | 19 | 14.5 | 14.5 | 100.0 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

**Table 21:** Question 19 - It has Navigational Aids.

| | | Facebook | | | | | | Twitter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Freq. | % | Valid % | Cum. % | | | Freq. | % | Valid % | Cum.% |
| Valid | SD | 3 | 2.3 | 2.3 | 2.3 | Valid | SD | 3 | 2.3 | 2.3 | 2.3 |
| | D | 12 | 9.2 | 9.2 | 11.5 | | D | 14 | 10.7 | 10.7 | 13.0 |
| | N | 35 | 26.7 | 26.7 | 38.2 | | N | 49 | 37.4 | 37.4 | 50.4 |
| | A | 51 | 38.9 | 38.9 | 77.1 | | A | 43 | 32.8 | 32.8 | 83.2 |
| | SA | 30 | 22.9 | 22.9 | 100.0 | | SA | 22 | 16.8 | 16.8 | 100.0 |
| | Total | 131 | 100.0 | 100.0 | | | Total | 131 | 100.0 | 100.0 | |

Table 19 is used to determine if it makes good use of color. For Facebook, 47.3% and 27.5% of the respondents agreed and strongly agreed, respectively. While 0.8% and 5.3% of the respondents strongly disagreed and disagreed, respectively. However, for Twitter, 35.9% and 26.0% of the respondents agreed and strongly agreed, respectively. While 1.5% and 8.4% of the respondents strongly disagreed and disagreed, respectively.

Table 20 is used to evaluate its organization of information. For Facebook, 45.8% and 21.4% of the respondents agreed and strongly agreed, respectively. While 0.8% and 6.9% of the respondents strongly disagreed and disagreed, respectively. While for Twitter, 40.5% and 14.5%

of the respondents agreed and strongly agreed, respectively.

Table 21 is used to determine if it has navigational aids. For Facebook, 38.9% and 22.9% of the respondents agreed and strongly agreed, respectively. While 2.3% and 9.2% of the respondents strongly disagreed and disagreed, respectively. The remaining 26.7% chose to remain neutral. Conversely, for Twitter, 32.8% and 16.8% of the respondents agreed and strongly agreed, respectively. While 2.3% and 10.7% of the respondents strongly disagreed and disagreed, respectively. The remaining 37.4% chose to remain neutral.

## CONCLUSION

This paper had contributed to the research in website usability. It summarizes many website usability issues and groups the issues into a set of 19 usability guidelines (for each site). The guidelines can be used to evaluate usability of websites as well as help Web designers and developers to build more usable websites. It uses the usability guidelines to build an evaluation tool, which can assist webmasters to improve their websites.

The results obtained from this study show that Facebook meets more usability criteria than Twitter. It can thus be concluded that due to the high rate of positive responses gotten from this research on usability and efficiency of Facebook and Twitter in the University of Benin community that Facebook is more efficient. To validate the result of this study, future research should be given enough time and resources to facilitate the completeness of this study. Also, a larger target should be aimed at in order to cover a large sample size. Future research should also focus more on specific privacy impact assessments.

## REFERENCES

1. Arno, C. 2012. "Worldwide Social Media Usage Trends in 2012". http://searchenginewatch.com/article/2167518/worldwide.

2. Boyd, D. and M. Ellison. 2007. "Social Networking Sites: Definition, History and Scholarship". Retrieved May 16, 2017 from http://jcmcindiana;edu/vol13/issue//boyd.ellison.html.

3. Essoungou, A.M. 2011. "Nigeria's April Elections set New Records in use of Social Media". Retrieved from: http://nigeriansabroadlive.com/nigerias-april-of-social-media/.Accessed on June 17, 2017.

4. Fisher, D. 2011. "Phishing, Social Networking Attacks on the Rise. Threat Post". Retrieved June 11, 2017, from World Wide Web. http://threatpost.com/enUS/blogsPhishing-social-networking-attack-rise-05/2011.

5. Folorunso, O., R.O. Vincent, A.F. Adekoya, and O.O. Adewale. 2010. "Diffusion of Innovation in Social Networking Sites among University Students". *International Journal of Computer Science and Security (IJCSS)*. 4(3):361-372.

6. Idakwo, L. 2011. "The Use of Media Among Nigeria Youths". Retrieved from: http://www.slideshare.net/goldlami/the-use-of-social-media-among-Nigeriayouth2. Accessed on June 17, 2017.

7. Kaplan, A.M. and H. Michael. 2010. "Users of the World Unite: The Challenges of Opportunities of Social Media". *Business Horizons*. 53(1):67.

8. Onomo, A.A. 2012. "People Power. 15 Social Media". *The Guardian*. 38.

9. Rachna, J. 2010. "4 Ways Social Media is Changing your Relationships". Retrieved June 17, 2017 from http://www.socialmediaexamines.com/4-ways-social-media-is-chaning-yourrelationships/.

10. Trukle, S. 2011. "Alone Together: Why We Expect more from Technology and from Each Other". Retrieved 6/12/17, http://en.wikipedia.org/wiki/sherry_turkle....

11. Valtysson. 2010. "Access Culture: Web 2.0 & Cultural Participation". *International Journal of Cultural Policy*. 16(2):200-214.

12. Wikipedia. 2017. "Criticism of Facebook". Retrieved July 11, 2017, from World Wide Web: http://en.wikipedia.org/wiki/criticism-of-facebook#terms-of-use-controversy.

13. Will, M. 2011. "Africa Facebook Phenomena Nigeria, Kenya, South Africa." Retrieved December 16, 2011 from http://www.afrinnovator.con/blog/2011/01/04/af.

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