Are users satisfied with resources and services? The case of Webster University Ghana Campus Library

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Introduction

An academic library is considered as the heart of any academic institution without which no university can survive. Libraries are believed to be one of the key departments which provides invaluable information resources and facilities to support teaching, learning and research activities in academic institutions (Tiemo & Atebo, 2016). Currently, academic libraries are paying much attention to satisfying users’ information needs with quality resources and improved services. As such, the extent of user satisfaction of the resources and services provided by academic libraries justifies their existence (Adeniran, 2011).

User satisfaction is one of the processes for assessing the efficiency of library services. As such, Madhusudhan (2010) recommended that, libraries are supposed to introduce online and offline feedback systems to track the effectiveness of their resources and services. In the view of Ijekhuamhen, Aghojare and Ferdinand (2015), assessing library services consistently helps to determine or establish the level of user satisfaction and improved services. Factors such as prompt access to materials, organization of materials, size and collection of the library, skills of library staff in providing users with the right resources were identified to determine user satisfaction.

Webster University was founded in 1915 in St. Louis, MO, USA. and has a network of campuses in Europe, Asia and since late 2013, Africa, in Accra, Ghana. The network of international campuses was created as part of the university’s overall mission of “ensuring high-quality learning experiences which transform students for global citizenship and individual excellence”. The Ghana campus was opened to serve students in Ghana, the sub-region and Africa as a whole who have the ambition and drive to succeed as global citizens in Business, International Relations, Media Communications, Computer Science and Psychology at both undergraduate and graduate levels. At the time of this study, it had a student population of 107 with a blend of local and foreign faculty members. Webster University’s Ghana Campus
is accredited in Ghana by the National Accreditation Board (NAB) and in the USA by the Higher Learning Commission (HLC). Webster Ghana Library has an increasing collection of nearly 3,000 books and a global collection of over 500,000 books which students in Ghana also have access to, through the internet. The library provides access to nearly 186 online databases including e-journals, streaming videos, e-newspapers, business cases, and e-books. Presently, the library offers services which include orientation, reference and lending, electronic resources training, current awareness, inter-library loan and ask-a-librarian. Services such as printing and photocopying are offered at no cost to patrons. Available facilities at the library include reading room, computer laboratory and a comfy newspaper lounge. It is opened from 8am to 10pm but extended to 12 a.m. during peak periods.

Webster University has a policy to evaluate library resources and services annually in order to build on the strengths and minimize the weaknesses of the library. In addition, it helps in providing efficient and effective services to library clientele. Since the inception of Webster Ghana Campus, this is the first official assessment of the library. Also, there are considerable literature on user satisfaction with library services and resources in Ghana (Yeboah, Adams & Boakye, 2018; Akussah, Asante, & Adu-Sarkodee, 2015; Larson, & Owusu-Acheaw, 2012). However, most of them are centred on the public academic institutions leaving a research gap with respect to the private universities. This study therefore aims at filling the gap by investigating the extent of user satisfaction with resources and services at Webster Ghana Library.

The study was intended to establish the extent to which Webster Ghana Library users were satisfied with the library’s resources and services. Specifically, the study sought to:

- Determine the level of users’ satisfaction with the physical facilities of the library.
- Determine the level of users’ satisfaction with the collections of the library.
- Find out the level of users’ satisfaction with the services provided by the library.
• Find out the level of users’ satisfaction with the knowledge of library staff
• Identify challenges users faced in obtaining needed information.

Hypothesis

H1: There is no significant relationship between physical facilities of a library and library user satisfaction.

H2: There is no significant relationship between library collections and library user satisfaction.

H3: There is no significant relationship between knowledge of library staff and library user satisfaction.

H4: There is no significant relationship between library services and library user satisfaction.

Literature Review

Library resources can be defined extensively to include not only the library collections or information materials in a library but also other facilities like computing facilities, internet connectivity and accessibility, discussion rooms, library space as well as human and financial resources. In the opinion of Shrestha (2008), library resources may include information resources, library facilities, personnel and all activities a library carries out to help satisfy the information needs of its users. Library resources should be considered as a benchmark for measuring an academic institution’s quality and distinction (Oyewusi & Oyeboade, 2009). Adeniran (2011) stated that university libraries should provide sufficient resources to enhance teaching, learning and research activities in the parent institutions. Therefore, in order to increase patronage, libraries must provide good quality resources and services which can satisfy the information needs of their users (Motiang, Wallis & Korodia, 2014).

Physical facilities of a library consist of the library building, furniture, lighting system, ICT tools, among others. These are crucial components of any library structure. Providing
Conducive library environment can greatly impact on user satisfaction. Khan and Bhatti (2012) found in a study on department libraries at the University of Peshawar, that poor physical facilities was one of the key issues affecting the library. New library buildings and renovated ones had seen remarkable rise in patronage according to Staines (2012). He further stated that contemporary academic libraries are supposed to measure up to general or worldwide design standards; disability friendly facilities, flexible layout and compatibility with modern technologies. Contemporary libraries should provide discussion rooms as a change in classroom instructions encourages more teamwork nowadays (Sens, 2009).

Iwhiwhu and Okorodudu (2012) noted that library patrons determine the sufficiency of library resources and services by the satisfaction they derive from them. User satisfaction does not only indicate users’ impressions about library services and resources but also, their readiness to come back the next time they are in need of information (Ikwnwe & Adegbilero-Iwari, 2014). Oyewusi and Oyeboade (2009) indicated that library collections should include print and non-print materials such as audio-visuals, maps, books, electronic resources, newspapers, computer software, art reproductions and CD-ROMs. Electronic resources, most importantly, electronic journals have become very popular in Ghanaian academic libraries (Boakye, 2015).

One of the key resources of the library is its human resources. A librarian is a person who is well trained and educated to manage information in variety of formats and settings (Bopp and Smith, 2011). In the library profession, the library staff are usually broadly categorized into non-professional, para-professional and professional. According to Martin-Yeboah (2016), non-professional staff are those with no formal training in library or information science-related programs. Employees who possess college or university Diplomas or Bachelor’s degree in library/information science-related programmes are considered as para-professionals whereas those with a minimum of master’s degree in library/information science-related programmes are considered as professionals. Well trained professional library staff is a major
contributing factor to the success of any academic library. Khan and Bhatti (2012) assert that librarians provide assistance to users to navigate through the information systems or the internet and also help them to efficiently evaluate information and this helps in library user satisfaction.

Academic library patrons encounter a number of challenges which include limited library resources, facilities and skills. In assessing the use of some libraries in Nigeria, Onaolapo (2016) reported of inadequate collections and facilities as major challenges hindering patrons from using the library. In addition, the study found that the library users also lacked skills in accessing electronic resources. Larson and Owusu-Acheaw (2012) also found that users of the Institute for Educational Development and Extension (IEDE) Library, University of Education, Ghana, encountered challenges such as poor internet connectivity, lack of skills in retrieving electronic information and outdated materials. At the University of Peshawar, Khan, Bhatti, Khan, and Ismail (2014) reported of poor facilities, lack of electronic resources and inadequate collections as the major problems library patrons face in using the library.

**Methodology**

The study used the survey method with the support of a questionnaire to collect data for analysis. The students and faculty members of Webster University, Ghana Campus constituted the population for the study. Most of the faculty members are adjunct and for that reason, only those who taught during the Fall Semester, 2017 were included in the study. The reason being that, it would have been very difficult if not impossible to locate all the faculty members who were not teaching during the Fall Semester, 2017 as they were engaged in different activities at different locations both locally and internationally. The total number of students at Webster Ghana Campus at the time of the study was 107 and faculty members were 21. The study population was 128 as shown in Table 1 below.
<table>
<thead>
<tr>
<th>Library users</th>
<th>Population size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>107</td>
</tr>
<tr>
<td>Faculty members</td>
<td>21</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>128</strong></td>
</tr>
</tbody>
</table>

Source: Field data, 2018.

The researcher administered the questionnaire (see Appendix) personally to all the students and faculty members with the support of a research assistant from the library who was appropriately oriented. Data analysis was done using SmartPLS software to determine the extent to which four dimensions of the library; facilities, resources, knowledge of staff and services, impact user satisfaction. The structural equations modelling approach with partial least squares was adopted to enable the predictability of the dimensions to user satisfaction and also explain the extent to which the dimension actually measure user satisfaction.

**Results of Data Analysis**

A total of 76 questionnaires were returned and found usable for analysis out of the 128 questionnaires distributed to respondents. This represents a response rate of 59%. Babie (2014) argues that a response rate of 50% is adequate enough for analysis and reporting in survey research. He further rates 60% as good and 70% as very good. Hence a response rate of 59% could be considered for analysis. Out of the 76 respondents, 35 (46%) were males and the remaining 41 (54%) were females.

**Availability of Physical Facilities at the Library**

Physical facilities of a library include library building design, location of the library, reading space, computing facilities, internet connectivity and accessibility, discussion rooms and library furniture. However, apart from library building design, location of the library, reading space and library furniture which are crucial components of every library, there was the need to establish the availability of the rest of the facilities before respondents could show their
satisfaction of them or otherwise. Results of the availability of those facilities are shown in Figure 1 below.

Figure 1: Availability of Library Facilities

As shown in Figure 1, majority of the respondents 97.4% (74) indicated that Webster Ghana library has computing facilities. Also, 90.8% (69) of the respondents said they could connect to and access the internet at the library. However, there was no discussion room in the library as indicated by all the respondents.

Availability of Library Collections/Materials

Again, to know the satisfaction of library collections, the researcher first asked about the availability of the materials and the results are displayed in Figure 2.
Most of the respondents 68 (89.5%) confirmed the availability of reference sources of information as against 8 (10.5%) who answered “no” to the availability of these sources. Also, 75 (98.7%) of the respondents endorsed the availability of textbooks and 72 (94.7%) of them substantiated that periodicals were available at Webster Ghana library. With electronic resources, 61 (80.3%) of the respondents validated their availability at the library.

**Availability of Library Services**

In terms of availability of library services which include reference, circulation, user education and reprographic services, the results are shown in Figure 3 below:
Majority of the respondents indicated the availability of reference/information services 67 (88.2%), circulation services 70 (92.1%), user education services 65 (85.5%) and reprographic services 70 (92.1%).

**Measurement Validations**

To validate the reliability and validity of the measurement model, Composite Reliability (CR) and Average Variance Extracted (AVE) of the constructs were assessed (Chin, 1998). Table 2 shows that CR values are greater than 0.70 providing support for internal consistency. Also, AVE values for each factor was greater than 0.50 indicating acceptable convergent reliability. Moreover, per the recommendation of (Chin, 1998), square root of the AVE for each factor was found to be higher than the correlation with other factors (refer to Table 2) whereas cross-loadings of items load were higher on their own constructs than on other constructs (see Table 2). These show that, each factor shares higher variance with items in its own construct than with items in other factors which is an indication of acceptable discriminant validity.
### Table 2: Validation of Measures (Reliability and Validity)

<table>
<thead>
<tr>
<th></th>
<th>Composite Reliability</th>
<th>AVE</th>
<th>Knowledge of Staff</th>
<th>Library Collections</th>
<th>Library Facilities</th>
<th>Library Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of Staff</td>
<td>0.991</td>
<td>0.957</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library Collections</td>
<td>0.866</td>
<td>0.618</td>
<td>0.3359</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library Facilities</td>
<td>0.977</td>
<td>0.880</td>
<td>0.5715</td>
<td>0.5599</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Library Services</td>
<td>0.933</td>
<td>0.777</td>
<td>0.6636</td>
<td>0.3615</td>
<td>0.3837</td>
<td>1</td>
</tr>
<tr>
<td>User Satisfaction</td>
<td>0.810</td>
<td>0.520</td>
<td>0.8211</td>
<td>0.706</td>
<td>0.7079</td>
<td>0.7027</td>
</tr>
</tbody>
</table>

Source: Field data, 2018.

### Table 3: Factor Loadings and Cross Loadings

<table>
<thead>
<tr>
<th></th>
<th>Knowledge of Staff</th>
<th>Library Collections</th>
<th>Library Facilities</th>
<th>Library Services</th>
<th>User Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLS_1</td>
<td>0.9947</td>
<td>0.3262</td>
<td>0.5735</td>
<td>0.6692</td>
<td>0.8049</td>
</tr>
<tr>
<td>KLS_2</td>
<td>0.9947</td>
<td>0.3239</td>
<td>0.5734</td>
<td>0.6715</td>
<td>0.8052</td>
</tr>
<tr>
<td>KLS_3</td>
<td>0.9947</td>
<td>0.3259</td>
<td>0.5734</td>
<td>0.6704</td>
<td>0.8071</td>
</tr>
<tr>
<td>KLS_4</td>
<td>0.9947</td>
<td>0.3243</td>
<td>0.5734</td>
<td>0.6694</td>
<td>0.8048</td>
</tr>
<tr>
<td>KLS_5</td>
<td>0.9094</td>
<td>0.3423</td>
<td>0.4995</td>
<td>0.5628</td>
<td>0.7923</td>
</tr>
<tr>
<td>LCM_1</td>
<td>0.1387</td>
<td>0.7849</td>
<td>0.2824</td>
<td>0.2688</td>
<td>0.412</td>
</tr>
<tr>
<td>LCM_2</td>
<td>0.3934</td>
<td>0.7921</td>
<td>0.7048</td>
<td>0.2453</td>
<td>0.7421</td>
</tr>
<tr>
<td>LCM_3</td>
<td>0.1701</td>
<td>0.7972</td>
<td>0.3647</td>
<td>0.3311</td>
<td>0.4772</td>
</tr>
<tr>
<td>LCM_4</td>
<td>0.2661</td>
<td>0.7691</td>
<td>0.2366</td>
<td>0.3127</td>
<td>0.4649</td>
</tr>
<tr>
<td>LF_1</td>
<td>0.5697</td>
<td>0.5682</td>
<td>0.9951</td>
<td>0.388</td>
<td>0.7097</td>
</tr>
<tr>
<td>LF_2</td>
<td>0.5672</td>
<td>0.5719</td>
<td>0.9965</td>
<td>0.3835</td>
<td>0.7103</td>
</tr>
<tr>
<td>LF_3</td>
<td>0.5805</td>
<td>0.5696</td>
<td>0.9965</td>
<td>0.3904</td>
<td>0.7171</td>
</tr>
<tr>
<td>LF_4</td>
<td>0.5778</td>
<td>0.5614</td>
<td>0.9976</td>
<td>0.394</td>
<td>0.7137</td>
</tr>
<tr>
<td>LF_6</td>
<td>0.5767</td>
<td>0.5616</td>
<td>0.9969</td>
<td>0.3894</td>
<td>0.7113</td>
</tr>
<tr>
<td>LF_7</td>
<td>0.2681</td>
<td>0.2211</td>
<td>0.5633</td>
<td>0.1423</td>
<td>0.3215</td>
</tr>
<tr>
<td>LS_1</td>
<td>0.549</td>
<td>0.3513</td>
<td>0.3168</td>
<td>0.8889</td>
<td>0.6074</td>
</tr>
<tr>
<td>LS_2</td>
<td>0.6317</td>
<td>0.3664</td>
<td>0.3628</td>
<td>0.9507</td>
<td>0.7063</td>
</tr>
<tr>
<td>LS_3</td>
<td>0.4412</td>
<td>0.2466</td>
<td>0.2599</td>
<td>0.8103</td>
<td>0.4768</td>
</tr>
<tr>
<td>LS_4</td>
<td>0.6853</td>
<td>0.2961</td>
<td>0.396</td>
<td>0.8703</td>
<td>0.6538</td>
</tr>
<tr>
<td>SAT_1</td>
<td>0.3977</td>
<td>0.7959</td>
<td>0.7056</td>
<td>0.2481</td>
<td>0.7464</td>
</tr>
<tr>
<td>SAT_2</td>
<td>0.1885</td>
<td>0.7782</td>
<td>0.3925</td>
<td>0.3729</td>
<td>0.5755</td>
</tr>
<tr>
<td>SAT_3</td>
<td>0.9094</td>
<td>0.3435</td>
<td>0.4995</td>
<td>0.5621</td>
<td>0.7916</td>
</tr>
<tr>
<td>SAT_4</td>
<td>0.7586</td>
<td>0.2157</td>
<td>0.4378</td>
<td>0.8174</td>
<td>0.7508</td>
</tr>
</tbody>
</table>

Source: Field data, 2018.
Research Model Results

The bootstrapping procedure in SmartPLS was first run to assess the path significance of the relationships between the dimensions of library services and user satisfaction. The PLS algorithm was then run to examine the path coefficients and explanatory powers of the constructs in the model. Results are shown in Table 4 and Figure 1 below.

Table 4: Test of Significance Levels

<table>
<thead>
<tr>
<th>Construct</th>
<th>Original Sample (O)</th>
<th>Sample Mean (M)</th>
<th>T Statistics</th>
<th>P-value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of Staff -&gt; User Satisfaction</td>
<td>0.4892</td>
<td>0.5300</td>
<td>2.0940</td>
<td>0.0198</td>
<td>p ≤ 0.05</td>
</tr>
<tr>
<td>Library Collections -&gt; User Satisfaction</td>
<td>0.4009</td>
<td>0.3280</td>
<td>1.7834</td>
<td>0.0393</td>
<td>p ≤ 0.05</td>
</tr>
<tr>
<td>Library Facilities -&gt; User Satisfaction</td>
<td>0.1342</td>
<td>0.1206</td>
<td>0.7088</td>
<td>0.2403</td>
<td>n/s</td>
</tr>
<tr>
<td>Library Services -&gt; User Satisfaction</td>
<td>0.1817</td>
<td>0.1746</td>
<td>1.4184</td>
<td>0.0801</td>
<td>p ≤ 0.10</td>
</tr>
</tbody>
</table>

Source: Field data, 2018.

Figure 4: Model Results for User Satisfaction Model with Library Services

Significance levels: *p ≤ 0.05; **p ≤ 0.10
Overall, the four dimensions; physical facilities, library collections/materials, knowledge of library staff and library services provided explain about 90.7% of what accounts for user satisfaction with the library. Moreover, the results show that knowledge of staff ($\beta = 0.489$, $p \leq 0.05$) leads most significantly to user satisfaction of library patrons. This is followed by available library resources/materials ($\beta = 0.401$, $p \leq 0.05$) and library services offered ($\beta = 0.182$, $p \leq 0.10$). Although the physical facilities ($\beta = 0.134$, n.s.) of a library influences user satisfaction, this is not significant. Therefore, the results of the hypothesis tested in the study are as follows:

**H1**: There is no significant relationship between physical facilities of the library and library user satisfaction. Every unit of physical facilities of the library translate into 0.134 user satisfaction at a significance level of 0.05 which is too small. Therefore, the null hypothesis is rejected.

**H2**: There is a significant relationship between library collections and library user satisfaction. Every unit of the library’s collections translate into 0.401 user satisfaction at a significance level of 0.05 which is high. Therefore, the null hypothesis is confirmed.

**H3**: There is a significant relationship between knowledge of library staff and library user satisfaction. Every unit of the knowledge of library staff translate into 0.489 user satisfaction at a significance level of 0.05 which is quite high. Therefore, the null hypothesis is confirmed.

**H4**: There is no significant relationship between library services and library user satisfaction. Every unit of the library’s services translate into 0.182 user satisfaction at a significance level of 0.05 which is acceptable. Therefore, the null hypothesis is confirmed.

**Major Challenges Users Faced in obtaining Information Needs**

In an academic library environment, users sometimes face a number of challenges which, if not attended to, could significantly affect user satisfaction and patronage of the library at large.
The respondents were thus asked to indicate the challenge(s) they mostly faced in obtaining needed information. The responses are represented in figure 5.

**Figure 5: Major challenges users faced in obtaining information needs**

![Challenges](image)

Source: Field data, 2018.

From Figure 5, major challenges identified by respondents in obtaining needed information were: limited library opening hours (18.0%), unstable internet access (14.8%), insufficient physical facilities (reading space) (12.9%), inadequate library collections (11.6%), inadequate computer facilities (11.0%), lack of electronic resources (9%), lack of library rules and regulations (8.4%), difficulty in retrieving electronic resources (8.4%) and outdated library materials (7.1%).

**Discussions**

In determining the level of users’ satisfaction with library facilities, collections and services, it was necessary to check their availability first. To this end, the study found that with the exception of discussion room, other facilities like computing and internet facilities were
available. However, Sens (2009) emphasizes the need for modern libraries to provide discussion rooms as a shift in pedagogy has made learning more team oriented than individualistic. He argues that discussion rooms are critical for students’ success and full utilization of the library. Most of the respondents also confirmed the availability of reference sources, textbooks and electronic resources. Library services including reference, circulation, user education and reprographic services were also found to be available at the Webster Ghana library.

With regard to users’ satisfaction with physical facilities, the study found that every unit of the library’s physical facilities translate into 0.134 user satisfaction which is very low. That is, users were dissatisfied with the current physical facilities at the library. The absence of facilities like discussion room, unstable internet access and inadequate computer facilities found by the study as challenges contributed to this. Sens (2009) emphasised that modern academic libraries should provide specialty space such as communication centres, writing centres, tutoring centres, presentation rooms, distance learning rooms for video conferencing, student and faculty lounges, cafés and light dining venues, art galleries. Staines (2012) states that modern academic libraries are expected to meet universal design criteria; good exterior and interior design, flexible layout, simplified floor design, disability friendly facilities and compatibility with modern technologies. As a result, if more physical facilities are added to the current ones at Webster Ghana library, user satisfaction for physical facilities will also increase.

The study also found that, every unit of library collections translate into 0.401 user satisfaction out of 1.0. This is an indication that, most of the library users were satisfied with the current collections at Webster Ghana library. Again, it was revealed from the study that, every unit of knowledge of library staff translate into 0.489 user satisfaction and that was the highest. This means that majority of the library users were much satisfied with knowledge of the library staff. The library users also considered knowledge of library staff to be very critical in user
satisfaction as pointed out by Khan and Bhatti (2012). In the case of library services, every unit translate into 0.182 user satisfaction. Though, this is low satisfaction compared to the others, it is impactful. The reason is that, if more services are added to the current services at the library, it will lead to a higher user satisfaction. The findings again indicate that, the four dimensions; physical facilities of a library, library collections/materials, knowledge of library staff and library services are the perfect factors for measuring or determining the level of user satisfaction in a library because they explain more than 90% of what account for user satisfaction in a library (refer fig. 1).

Moreover, the findings show that, respondents faced major challenges such as limited library opening hours, unstable internet access, insufficient physical facilities, inadequate library collections, and inadequate computer facilities. Considering percentages of respondents who indicated these challenges, it may be concluded that the challenges were not that critical compared to findings by Owusu-Acheaw (2012), Onaolapo (2016) and Ismail (2014) who reported higher percentages of these challenges.

**Conclusion**

Regular appraisal of library services, facilities, resources and personnel is very important in all academic libraries. It helps to improve user satisfaction and promotes efficiency in research, teaching and learning activities in the university environment. Webster Ghana library has facilities like conducive reading space with comfortable furniture, computer and internet facilities, though, the library has no discussion room. The available library collections include reference sources, textbooks, periodicals and electronic resources. The library offers services such as reference, circulation, user education and reprographic service. Users were satisfied with the collections, services and knowledge of library staff. However, user satisfaction with the library’s physical facilities was poor. Challenges such as limited library opening hours,
unstable internet access, insufficient physical facilities (reading space), inadequate library collections, and inadequate computer facilities were found to limit user satisfaction of the library’s services and resources.

**Recommendations**

Based on the findings of the study, it is recommended that management of the library should extend the opening hours from 10:00 p.m. to 12:00 a.m. and if possible consider opening the library for 24hrs during examination periods at the end of every term or semester. Also, technical assistance should be sought by the library authorities from information technology experts to solve the issue of unstable internet access to improve user satisfaction in that regard. Additional reading and discussion rooms should be acquired for the library to increase the seating capacity and provide convenient space for users to have group discussions. The size of the collections should be increase and more computers should also be added to the ones at the computer laboratory so that users can have access to wide range of collection and computers respectively at all times.

**References**


