Assessing Institution's Footprint in Web 2.0: A Comparative Analysis of University Library Websites in Bangladesh

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Abstract - **The objective of this study was to compare the availability of web 2.0 tools on selected public and private university library websites in Bangladesh. Existing studies of web 2.0 seem to have ignored the possibility of comparing public university library websites with private university library websites. Conducting a study like this will provide an overview about the existing status of Web 2.0 tools. Content analysis was adopted as the method for the study. Twenty university library websites, comprised of ten top-ranked public and ten top-ranked private universities in Bangladesh, were studied for data collection. The findings demonstrate that the use of web 2.0 tools on the selected university library websites is still in its early stage, but it has been growing rapidly. More than 90% of the university libraries apply one or more web 2.0 tools to their websites. The private university library websites are ahead of public university libraries in terms of the integration of web 2.0 tools. Internal applications that are not publicly accessible contain information that may not be collected through content analysis since these links usually cannot be found on library web sites.This study is unique in terms of comparing public and private university library's web contents. The findings from this comparative analysis will be useful for a university to track their own position and also those are planning to develop a website.**
*Keywords:***Bangladesh, Universities, Web 2.0 Tools, Library 2.0, Library Websites**

I. INTRODUCTION

The goal of Bangladesh government is to build "Digital Bangladesh" by the year 2021. This has paved the way for exchange of digital information in terms of education, transfer of knowledge, and access to information on local and global aspects. A website is capable of ensuring easy access to knowledge, preservation of knowledge systems, dissemination of information and better information services, which are core concerns of the Digital Bangladesh Vision 2021.To make the dream "Digital Bangladesh" comes true, the availability of services and resources on library websites is a prerequisite, as the library websites serve as the windows through which the libraries provide electronic services to the distant users.

A. University Education in Bangladesh

The University Grants Commission (UGC) is the highest constitutional body in the field of higher education in Bangladesh. Quality enhancement and quality assurance in higher education in all the public and private universities are primary objectives of the UGC through the supervision, maintenance, promotion and coordination of university education. The UGC assesses the needs of the universities in terms of the funding and approval of new faculties, departments, institutes, ensuring academic, administrative and financial discipline in the universities through continuous monitoring and supervision, and conducting inquires and surveys to prevent corruption and irregularities in all types of universities.According to the UGC, there are currently 141 public and private universities in Bangladesh. The number of public universities is 40 and private universities are 101. Public universities are funded by the government, although they are run as self-managed organizations. The oldest public university in Bangladesh is the University of Dhaka, established in 1921. The establishment of a private university is a relatively new trend in this country. In the early 1990s, the private sector has undertaken responsibility for the creation of universities. Since then, the country has experienced rapid growth in private universities (UGC, 2018).

TABLE I WEBSITES OF PUBLIC AND PRIVATE UNIVERSITIES AND THEIR URLS

No.	University	Abbreviation	URL
	Public University		
01	Bangabandhu Sheikh Mujib Medical University	BSMMU	www.bsmmu.edu.bd
02	Bangladesh Agricultural University	BAU	www.bau.edu.bd
03	Bangladesh University of Engineering and Technology	BUET	www.buet.ac.bd
04	Jahangirnagar University	JU	www.juniv.edu
05	Khulna University of Engineering & Technology	KUET	www.kuet.ac.bd
06	Rajshahi University	RU	www.ru.ac.bd
07	Shahjalal University of Science and Technology	SUST	www.sust.edu

08	Sher-e-Bangla Agricultural University	SAU	www.sau.edu.bd
09	University of Chittagong	CU	www.cu.ac.bd
10	University of Dhaka	DU	www.du.ac.bd
	Private Universities		
11	Ahsanullah University of Science and Technology	AUST	www.aust.edu
12	American International University-Bangladesh	AIUB	www.aiub.edu
13	BRAC University	BRACU	www.bracu.ac.bd
14	Daffodil International University	DIU	https://daffodilvarsity.edu.bd
15	Eastern University Bangladesh	EU	www.easternuni.edu.bd
16	East-West University	EWU	www.ewubd.edu
17	Independent University Bangladesh	IUB	www.iub.edu.bd
18	North South University	NSU	www.northsouth.edu
19	United International University	UIU	www.uiu.ac.bd
20	University of Liberal Arts Bangladesh	ULAB	https://ulab.edu.bd

B. Web 2.0 Tools in Bangladesh

The web 2.0 options allow interactions across various digital platforms to build relationship with their community. Apparently, it appears that the implementation of web 2.0 tools for the library involves a little effort, they represent an inexpensive way to market the library, promote resources and communicate with the community. But after initial enthusiasm for the creation and use of any social media tool, the upkeep of the site or tool may deteriorate, resulting in untimely or inconsistent posts. An unattended site loses its social qualities and, instead of cultivating interaction, simply becomes another means of communication to seldom promote services and events" (Burclaff and Johnson, 2014).Applications developed under the umbrella term 'Web 2.0' include Social Networking Sites (SNS), really simple syndication (RSS), wikis, instant messaging, social tagging, mashup, social media sharing and much more other. Some of these applications in Bangladesh are described below:

1. *Social Networking Sites (SNS):*Though Facebook is a prime example of web 2.0 and currently arguably the most popular in public and private Universities to share activities, notice, program, new arrivals and to stay connected with the community, but as a notable professional network, usage of LinkedIn is unfortunate in Bangladesh. And as a first source of breaking news Twitter has a limited use to post text, image and links. To share image or video Pinterest is at a very early stage, but using Flickr to the same purpose remains unusual in country wide.

2. *Customizable User Interface:*The customizable user interface is one of the trendy elements of web 2.0 in Bangladesh to interact (catalog search, access to databases, and more) with the virtual community of the library site. Depending on the site design, a user can share and save, and create a more personal experience by logging into their account (Rogers, 2015).

3. *Instant Messaging (IM):*Using Zoho and Meebo service provider some libraries are providing online reference services, Ask a librarian service and instant messaging to all over the world.

4. *MashUp:* Though it allows the user to edit OPAC data and metadata, save user tags, instant messenger conversations with librarians, wiki entries with other users and catalogs (Ikonne, Onuoha and Madukoma, 2013), in Bangladesh Mashup is used only to edit OPAC.

5. *Media Sharing and Streaming:* Media refers to video, images, sound, and the like. A large numbers of websites (like YouTube, Voice Thread, Picasa etc.) are set-up for the sole purpose of sharing media while others have built-in media sharing features. In Bangladesh, Libraries used it to provide an introduction to library services and resources (information literacy tutorials) or to create tutorials for database searching maintaining a YouTube account.

6. *Mobile Applications:*In recent trends, the following mobile applications are becoming familiar in Bangladesh:
a. Mobile library websites for catalog and database searching, or searching other library services and resources.
b. Mobile SMS to provide alert of library loan and overdue notification.

7. *Really Simple Syndication (RSS):*There is only use of RSS is to provide new arrivals in the library or provide the latest news or events.

II. OBJECTIVES OF THE STUDY

The main objective of this study is to compare the presence of a variety of web 2.0 tools between public and private

university websites in Bangladesh.To achieve the aforesaid objective, the following research questions were investigated:

RQ_1. What types of web 2.0 technologies were adopted and exposed on library websites?

RQ_2. What are the differences between public and private university library websites in terms of adoption of web 2.0 tools?

III. LITERATURE REVIEW

Kehinde and Tella (2012) noted that the vast majority of library services are now web-based and therefore, attention is focused on designing user-friendly, easy-to-manage and well-maintained websites. The design of user-friendly websites ensures easy access by users.Adoption of web 2.0 tools is not a new phenomenon for libraries. There have been numerous studies that show that academic libraries, particularly those in developed countries, have successfully embraced social web tools (Tripathi and Kumar, 2010). There has, however, been a lack of literature concerning web 2.0 utilization by libraries in developing countries (Tripathi and Kumar, 2010).The frequent use of Face book, Twitter, YouTube, among others, provides alternatives to the use of libraries. This suggests that people can use electronic resources for academic purposes, but not directly with libraries (Prabhakar and Rani, 2017).

Han and Liu (2010) studied web 2.0 applications in the top Chinese university libraries and found that more than two-thirds of the Chinese 38 top university libraries apply one or more types of web 2.0 tools through the basic functions of their websites. Of the six types of tools, Catalog 2.0 and RSS are the most common, while Instant Messaging, Blog, SNS, and Wiki are less common.Shi and Chen (2010) showed in their research, two-thirds of Chinese university libraries deployed one or more web 2.0 technologies. Only one-tenth of libraries adopted more than four web 2.0 technologies. RSS was the most widely applied, while Wiki was the least.

Kehinde and Tella (2012) assessed university library websites in some selected university libraries in Nigeria. The study used content analysis as the research design. A total of 30 university library websites were selected from the three categories of universities in Nigeria to represent a purposive stratified sampling technique.A checklist was used as the research instrument. The criteria for the checklist were drawn on the basis of the assessment of library websites for web 2.0 tools, access to electronic materials and a link to the Nigerian University Commission virtual library. Four research questions were developed and answered, and the results revealed a low level of integration of web 2.0 tools on most of the websites.A comparative study of librarians in university libraries in Nigeria and South Africa regarding their Web usage of 2.0 tools was conducted by Baro, Ebiagbe, and Godfrey (2013). The results show that there are differences in the use of web 2.0 tools among librarians in university libraries in Nigeria and

South Africa. Differences also exist among the librarians in Nigeria and South Africa regarding the purpose for which the librarians use web 2.0 tools. Differences also exist among the librarians in Nigeria and their South African counterparts regarding the challenges in using web 2.0 tools. Librarians in Africa need to integrate web 2.0 elements into their library services to meet the needs of our users. Tella and Oladapo (2016) had carried out a comparative analysis using content analysis method of available features and web 2.0 tools on top ranked Nigerian and South African university library websites. The findings show that the use of web 2.0 tools in the selected universities is encouraging. The South African university libraries are ahead in terms of the incorporating of web 2.0 tools, e-resources, and e-databases available in their websites as compared to the Nigerian university.

Using a stratified sampling method Chua and Goh (2010) examined 60 well-ranked universities and 60 public libraries from North America to identify the widespread use of web 2.0 applications in Europe, and Asia. By means of a quality framework for library websites and a three-step content analysis (Krippendorff, 2004), the study considered 120 academic and public libraries in North America, Europe, and Asia, they found that blogs and RSS are the most popular web 2.0 tools, followed by instant messaging (IM). Social networking service (SNS), wiki, and tagging were less popular. Also, North American libraries engage more web technology than European and Asian libraries.

Hussain (2015) conducted an assessment of 188 American continents library associations' web sites. Based on the analysis, it was found that the majority of Web 2.0 tools have been used by the continental American library associations. This represents 89.86%, while only a small number of Web2.0 tools have been used by Asian library associations, or 25.64%. Most of the web 2.0 tools used by library associations are Face book, Twitter, RSS, LinkedIn, Flickr and Blogs. A good number of the studies reviewed in the literature present content analysis of library websites and library surveys.

Following the above literature, it can be assumed that many universities are either at an early stage of integrating web 2.0 tools or may be planning to do so. It is also observed that there were no previous studies that considered a comparison of web 2.0 features available in selected university library websites of two types, specifically public and private in Bangladesh, therefore, is an attempt to bridge this gap. Hence, it examines a comparative analysis of Web 2.0 features in selected public and private university websites in Bangladesh.

IV. METHODOLOGY

The study used content analysis (*brought back* Tella and Oladapo, 2015) of library websites to collect data on web 2.0 applications and electronic resources. Since questionnaire and survey methods is closely related with librarian's honesty and awareness and the library website is

considered as the window of all services and features, therefore using content analysis technique seems to better to obtain accurate information rather than others.At first, the author browsed minimum 50 university libraries randomly and found that majority of libraries don't have websites, just containing some basic information in the university central website, and a large number are at a very early stage of website development. This led to the author to choose Purposive sampling technique in selecting the university based on a specific purpose to enrich the study. Content Analysis was conducted from September 2017 to March 2018. The library websites were scanned to explore web 2.0 applications.

A. The Population of the Study

At present, there are 40 public and 101 private Universities in Bangladesh (University Grants Commission of Bangladesh, 2018), the top-ranked 10 public and 10 private universities of Bangladesh were considered for the collection of data. Though it is apparently looks 25% of public universities and only 10% of private universities were considered as sample, but the private universities are increasing in a rapid manner and samples were selected those which are at least fifteen year of establishment, because the newly established universities have less infrastructural facilities. Therefore, universities were chosen from a list of top-ranked universities in Bangladesh (top ten out of first fifteen to include a variety of universities like general, engineering, medical, agriculture etc.) published in studybarta, 2017. They have considered some factors to find out top universities in Bangladesh like, Teaching and learning innovation, Quality of Educators, Research Facilities, Financial Aid Services, Student to Faculty Ratio, Library and Laboratories, Graduation Rate, Size of the University, Jobs and Internship Opportunities, Updated Curriculum, Study Abroad Opportunities, Global Accreditation, Alumni Network, Cost of Tuition, Living, and More, Available Support Services, Safety and Campus Security Specially for the Women , Process of Freshmen Enrollment, Permanent Campus etc.(Studybarta, 2017).

For each of the universities, their library website was visited and data on their web 2.0 features electronic resources and electronic databases were collected and analyzed. Web pages were also viewed in local search engines using keywords that indicate various web 2.0 applications. Google has been used in many cases.

B. Data Collection Procedure

A checklist was developed for the collection of various web 2.0 technologies and e-resources option with "Present" or "Absent". The items of the checklist were included based on the previous study on this field and the current trends of their availability on the websites in country perspective. A draft of the checklist was sent to two experts (faculty member and librarian) for the validity of contents and suggestions for further improvement. They examined the items included and also helped by giving valuable insights for improving the draft. Twenty-two web 2.0 tools were explored to determine whether they are available in the mentioned library websites or not. Because website development is a dynamic process and contents can be changed in a rapid manner, the websites were explored a minimum of 25 separate times over the five month research process.

Data were recorded in a Microsoft Excel sheet. The presence of web 2.0 tools was represented by the number 1, and absent is 0. After inserting all the items of the checklists, the numbers were added to calculate the total number of presence of instance in Public university environment and other is for private university. The percentage of each web 2.0 tool was calculated based on the total presence web 2.0 in both type of university (public and private). The percentage of a single university in incorporating the number of web 2.0 was also calculated based on the total presence of web 2.0 tools by the total number of universities (both public and private).Then a comparison was made between public and private university library, the analysis of collected data have been interpreted with the help of tables, figures.

V. RESULTS

Table II and III show the availability of 22 common web 2.0 tools on the selected public and private university library websites, respectively. A total of 142 occurrences of the 22 web 2.0 tools were identified and assessed. They reveal that Facebook is the most common tool on the websites of both types of libraries, this tool accounted for 12.68 percent of all tools available of both types of universities.

TABLE II Web 2.0 Features Available On The Selected Public University Library Websites

S. No.	Checkpoints	BSMMU	BAU	BUET	JU	KUET	RU	SUST	SAU	CU	DU	Total
1.	Facebook	1	1	1	1	1	1	1	1	0	1	9
2.	Twitter	0	0	0	0	0	0	0	1	0	0	1
3.	LinkedIn	0	0	0	0	0	0	0	0	0	0	0
4.	Mash-up	0	1	1	0	1	1	0	1	1	1	7
5.	RSS	0	0	0	0	0	0	0	0	0	0	0
6.	Flickr	0	0	0	0	0	0	0	0	0	0	0
7.	Pinterest	0	0	0	0	0	0	0	0	0	0	0

8.	YouTube	0	0	0	0	0	0	0	0	0	0	0
9.	Google +	0	0	0	0	0	0	0	0	0	0	0
10.	Synchronous messaging/Instant Messaging	0	0	0	0	0	0	0	0	0	0	0
11.	New Books arrival notification	0	1	1	0	1	1	0	1	0	1	6
12.	Text-based chat service	0	0	0	0	0	0	0	0	0	0	0
13.	OPAC link	0	1	1	0	1	1	0	1	1	1	7
14.	Presentation sharing	0	0	0	0	0	0	0	0	0	0	0
15.	Discovery tool searching	0	0	0	0	0	1	0	0	0	1	2
16.	Remote Access	0	0	1	0	0	1	0	0	0	1	3
17.	Customizable Website	0	1	1	0	1	1	0	1	1	1	7
18.	Mobile Library site/phone apps	0	0	0	0	0	0	0	1	0	0	1
19.	FAQ(Frequently asked question)	0	0	0	0	1	0	0	1	0	1	3
20.	Feedback option	0	1	1	0	1	0	0	1	0	1	5
21.	Site search	0	0	0	0	1	1	0	1	0	1	4
22.	Google search	0	0	0	0	1	0	0	0	0	0	1
	Total	1	6	7	1	9	8	1	10	3	10	56

TABLE III WEB 2.0 FEATURES AVAILABLE ON THE SELECTED PRIVATE UNIVERSITY LIBRARY WEBSITES

S. No.	Checkpoints	AUST	AIUB	BRACU	DIU	EU	EWU	IUB	NSU	UIU	ULAB	Total
1.	Facebook	1	1	1	1	1	1	1	1	0	1	9
2.	Twitter	0	0	1	0	1	1	1	0	0	1	5
3.	LinkedIn	0	0	0	0	0	0	0	0	0	0	0
4.	Mash-up	0	0	1	1	1	1	1	1	1	1	8
5.	Really Simple Syndication(RSS)	0	1	1	0	1	1	1	0	0	0	5
6.	Flickr	0	0	0	0	0	0	0	0	0	0	0
7.	Pinterest	0	0	0	0	0	1	0	0	0	0	1
8.	YouTube	0	0	0	0	1	1	0	0	0	0	2
9.	Google +	0	0	1	0	0	1	0	0	0	0	2
10.	Instant Messaging	0	0	0	0	1	1	0	0	0	0	2
11.	New Books arrival notification	0	1	1	1	1	1	0	1	1	1	8
12.	Text-based chat service	0	0	0	0	1	1	0	0	0	0	2
13.	OPAC link	0	0	1	1	1	1	1	1	1	1	8
14.	Presentation sharing	0	0	0	1	0	1	0	0	0	0	2
15.	Discovery tool searching	0	0	1	0	0	1	1	0	0	0	3
16.	Remote Access	0	0	1	1	1	1	0	1	0	1	6
17.	Customizable Website	0	0	1	1	1	1	1	1	1	0	7
18.	Mobile Library site	0	0	1	0	0	0	0	0	0	0	1
19.	FAQ(Frequently asked question)	0	0	0	1	0	1	1	0	0	0	3
20.	Feedback option	0	1	1	1	0	1	0	0	1	0	5
21.	Site search	0	1	1	0	1	1	1	1	0	0	6
22.	Google search	0	0	0	0	0	1	0	0	0	0	1
	Total	1	5	13	9	12	19	9	7	5	6	86

A total presence of 56 web 2.0 tools (39.44% of the public libraries total) are available on the public university library websites, with University of Dhaka and Sher-e-Bangla Agricultural University providing 7.04%, followed by the Khulna University of Engineering & Technology with 6.34%, Rajshahi University with 5.63%, Bangladesh University of Engineering and Technology with 4.93%, Bangladesh Agricultural University with 4.23%, University

of Chittagong with 2.11%, Bangabandhu Sheikh Mujib Medical University, Shahjalal University of Science and Technology and Jahangirnagar University with only 0.70% web 2.0 tools.

In private university context, a total presence of 86 web 2.0 tools (60.56% of the private university libraries total) is available on the private university library websites. The library websites ofEast West University has 13.38% of private university total presence of web 2.0 tools , followed by BRAC University *w*ith 9.15%, the *E*astern University

Bangladeshwith 8.45%, theIndependent University Bangladesh and Daffodil International University with 6.34% each, North South University has 4.93%, University of Liberal Arts Bangladesh has 4.23%, American International University-Bangladesh and United International University have 3.52% tools each, and Ahsanullah University of Science and Technology has only 0.70%Web 2.0tool. Table IV shows a summary of comparison of common web 2.0 tools available on all selected University libraries in Bangladesh.

TABLE IV COMPARISON OF COMMON WEB 2.0 TOOLS AVAILABLE ON THE BOTH SELECTED PUBLIC AND PRIVATE UNIVERSITY LIBRARY WEBSITES

S. No.	Checkpoints	Public University	Private University	Total
1.	Facebook	9	9	18
2.	Twitter	1	5	6
3.	LinkedIn	0	0	0
4.	Mush-up	7	8	15
5.	Really Simple Syndication(RSS)	0	5	5
6.	Flickr	0	0	0
7.	Pinterest	0	1	1
8.	YouTube	0	2	2
9.	Google +	0	2	2
10.	Synchronous messaging /Instant Messaging	0	2	2
11.	New Books arrival notification	6	8	14
12.	Text-based chat service	0	2	2
13.	OPAC link	7	8	15
14.	Presentation sharing	0	2	2
15.	Discovery tool searching	2	3	5
16.	Remote Access	3	6	9
17.	Customizable Website	7	7	14
18.	Mobile Library site/phone apps	1	1	2
19.	FAQ(Frequently asked question)	3	3	6
20.	Feedback option	5	5	10
21.	Site search	4	6	10
22.	Google search	1	1	2
	Total	56	86	142
	Percent	39.44%	60.56%	

Both types of universities have same numbers of Face book, Feedback option, FAQ, Customizable Website, Google search option, and Mobile Library site options. Some other tools such as Mash-up, New Books arrival notification, OPAC links, and site search options are common in both types of University library websites. Some other tools like Pinterest, YouTube, Google+, Instant Messaging, Text-based chat service, Presentation sharing etc. which are available only on private University library's websites. The table shows that two tools LinkedIn and Flicker are not available in either public or private university library's

websites. Overall, the private University Library websites accounted for 60.56 percent of the total 142 tools used in both types of libraries, whereas the public University libraries comprise 39.44 percent of the total tools available.

VI. DISCUSSION

The objective of the study was to construct a comparative analysis of web 2.0 tools available on selected public and private university library websites of Bangladesh. A thorough assessment of the web pages shows that the

selected private university libraries are ahead in making Web 2.0 tools available on their university library websites, whereas only a few web 2.0 tools have been integrated on the public university library web pages. This is reflected in the total of 142 available web 2.0 tools of which private university library websites have 86, whereas the public university library websites share the remaining 56. It is clear that the diffusion rate of web 2.0 tools is higher among the private universities compared with public universities in Bangladesh.

The results revealed that the private university library websites contain a number of advertisements for programs, services, and activities offered by the library. This can be a form of current awareness service or library advocacy/marketing. However, WebPages of the selected public university libraries are simple and contain only a few words. The web pages look unsatisfactory with limited contents, showcasing the activities of the library. The design of the websites of most of the library web pages of the selected private universities is more appealing. They are eye-catching because of the color design and templates, whereas most of the library web pages in the selected public universities are not properly designed and are less appealing. Furthermore, the private university library websites give their users the opportunity to interact with the library through the effective use of web 2.0 tools, whereas this opportunity is limited as far as their public counterparts are concerned.Moreover, this study revealed that Face book is the most common web 2.0 tools available on both the public and private university library websites.

VII. CONCLUSION

The results of this study showed that the application of web 2.0 in the library has gained momentum in Bangladesh, but there is still a long journey ahead to popularize the web 2.0 applications in libraries. The results demonstrate that private universities seem to utilize the potentials of these tools more effectively than public universities. It is important that libraries should think carefully about how to further develop and take full advantage of web 2.0 tools to make them more meaningful to users.Further study in the area of web 2.0 applications may be expanded to investigate the utilization of web 2.0 tools in other academic libraries of Bangladesh. Another possible study would be a comparative analysis concerning adoption of newer web 2.0 based services between local and foreign libraries.

REFERENCES

[1] All Private University Ranking 2018 in Bangladesh. (2017, December 29). Retrieved on 11 February 2018, from http://studybarta.com/private-university-ranking-2017/

[2] Baro, E.E., Joyce, E., Vera, E., & Godfrey, Z. (2013). Library Hi Tech News Web 2.0 tools usage: a comparative study of librarians in university libraries in Nigeria and South Africa" Web 2.0 tools usage: a comparative study of librarians in university libraries in. *Library Hi Tech News The Electronic Library Is Library Hi Tech International Digital Library Perspectives*, *30*(3), 864–883.

[3] Burclaff, N., & Johnson, C. (2014). Developing a Social Media Strategy: Tweets, Pins, and Posts with a Purpose.

[4] Chua, A.Y., &Goh, D.H. (2010).A study of Web 2.0 applications in library websites. *Library &information science research*, *32*(3), 203-211.

[5] Han, Z., &Quan Liu, Y. (2010).Web 2.0 applications in top Chinese university libraries. *Library hi tech*, *28*(1), 41-62.

[6] Hussain, A. (2015). Adoption of Web 2.0 in library associations in the presence of social media. *Program*, *49*(2), 151-169.

[7] Ikonne, C.N., Onuoha, U.D., &Madukoma, E. (2013). Marketing of information services in theSocial Media framework of communication. *International Journal of Innovative Research in Management, 2*(10), 1–10.

[8] Kehinde, A.A., &Tella, A. (2012).Assessment of Nigerian university library websites/webpages. *New Review of Information Networking*, *17*(2), 69-92.

[9] Krippendorff, K. (2004). Content Analysis: An Introduction to Its Methodology (2nd ed).Thousand Oaks, CA: Sage. *Organizational Research Methods,13*(2), 392-394.

[10] Prabhakar, S.V., & Rani, S.V.M. (2017). Influence of social networking sites on library and information centers. *International Journal of Library & Information Science*, *6*(1), 83-87.

[11] Public University Ranking in Bangladesh. (2017, October 04). Retrieved 11 February 2018, from http://studybarta.com/public-university-ranking-in-bangladesh/

[12] Rogers. K. (2015). Academic and Public Libraries' Use of Web 2.0 Applications and Services in Mississippi. *SLIS Connecting*, *4*(1). Retrieved from https://doi.org/10.18785/slis.0401.08

[13] Si, L., Shi, R., & Chen, B. (2011).An investigation and analysis of the application of Web 2.0 in Chinese university libraries. *The Electronic Library*, *29*(5), 651–668

[14] Tella, A., &Oladapo, O.J. (2016).A comparative analysis of available features and Web 2.0 tools on selected Nigerian and South African university library websites. *The Electronic Library*, *34*(3), 504-521.

[15] Tripathi, M., & Kumar, S. (2010). Use of Web 2.0 tools in academic libraries: A reconnaissance of the international landscape. *The International Information & Library Review*, *42*(3), 195-207.

[16] University Grants Commission of Bangladesh. (2018). *Ugc.gov.bd*. Retrieved 11 February 2018, from http://www.ugc.gov.bd/en/home/downloadfile/3.