Content Analysis of Web Presence of University Libraries In Bihar

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ABSTRACT: The paper is an attempt to examine the contents of university library website, that has been carried on the sixteen universities in Bihar. The content available on the website was analysed according to a framework designed to meet the objectives of the study. The data was collected from the websites of universities during January to August 2015 that has been ranked using a rating scale. An analysis reveals that CUSB ranks the topmost among all the universities in Bihar followed by CNLU, MU and LNMU. The study would be helpful for the universities to know their status of website and key points that may be addressed to improve their web presence.

1. Introduction

With the passage of the Internet into a mainstream technology in the 1990s organizations, institutions and government bodies have ensured to have their virtual web presence. The web presence has led to an increase in the volume and types of web document.The present study is aimed towards investigation of the web presence of the university libraries in Bihar that has been a supreme centre of learning.

2. Literature review

There have been a number of studies that focus on the library websites and most of the studies are about the performance evaluation and usability of library websites with a little importance given to content analysis. (Clausen, 1999) has compared

Danish university library website and found that the library websites were above average. Chiseng(1998) evaluated the online access to e-resources through university library website in Sub-Saharan Africa. Cohenand (1999) found that larger institutions made greater use of freely available internet resources and were more likely to create web version of paper documents. Still(2001) in a study of university library website in four English speaking countries found that the visual display of information was similar across all countries and there was much less information on instructional materials and remote access.

3. Objective of study

The study aims to determine the information content on library webpages of university libraries in Bihar, India. More specifically, the study aims

i. To access the content of library webpage of universities libraries in Bihar,
ii. To comparative study of contents of library webpage of universities libraries in Bihar,
iii. To know the existing facilities providing in the website of universities library,
iv. To rank the selected university library website based on the scoring points criteria,
v. To suggest measure for the improvement of university library website.

4. Methodology

The modus operandi of research incorporated an analytical approach to each of the university library website (16) in Bihar listed in Appendix - A. For the purpose of data collection an exhaustive checklist was used as an instrument that comprised of factors ranging from availability of website, separate library webpage, general information, nature of links and most noteworthy was the status of library collection, services, sections, application of Web 2.0 and so on. Data was collected by the researcher cautiously; by browsing each of the library websites in between January 2015 to August 2015. Moreover, in order to examine the collected data, a numerical scoring system was used; wherein for the presence of a feature on the web1= each and every Feature, 1= some features and 0= no feature. In order to meet the objectives of the study, SPSS software was used to find out the mean and finally the data was presented through tables and figure.

5. Analysis

S.No	List of Universities	University Website		Individual Overall Rank Points
		Available	Not Available	(availabilities scale)
1.	AKU	1	0	1
2.	AMU*	0	1	0
3.	BNMU	1	0	1
4.	BRABU	1	0	1
5.	CNLU	1	0	1
6.	CUSB	1	0	1
7.	JPU	1	0	1
8.	KSDSU	1	0	1
9.	LNMU	1	0	1
10.	MMHAPU	1	0	1
11.	MU	1	0	1
12.	NIU	1	0	1
13.	NOU	1	0	1
14.	PU	1	0	1
15.	TMBU	1	0	1
16.	VKSU*	1	0	1
	Total Score	**15**		**01**

Table 1. Web presence of university libraries of Bihar

Data analysed in the study has been presented below.

5.1 Background Information of the web presence of universities
Table 1 presents a snapshot of the web presence of the university libraries in Bihar. From the table it can be found that out of 16 universities, 15 had their web presence. It can be surmised that as the extension centre of AMU has recently been started in Kisanganj which may not be likely to work as an autonomous unit due to which separate website would not have been launched. As the present study was targeted towards the study of web presence of the university libraries in Bihar; AMU (Kisanganj) was excluded from the study as it did not meet the criteria.

[**N.B.** - 1=Each and Every Feature of Checklist as well as Table, 1=Yes and 0=No]

5.2 Web presence of university libraries
Table 2 presents an overview of the presence of a university library webpage. It is found that out of 15 selected universities, 8 universities had web presence of their university libraries while 7 had not.

S.No	Universities in Bihar	Library Webpage Available	Not Available	Individual Overall Rank Points (availabilities scale)	Web link of Library Webpage
1.	AKU	0	1	0	NA
2.	BNMU	0	1	0	NA
3.	BRABU	1	0	1	NA [library web page exist but not open]
4.	CNLU	1	0	1	http://www.cnlu.ac.in/ index.php?option=com_ content&view =article&id=80&Itemid=67
5.	CUSB	1	0	1	http://cub.ac.in/ index.php?option=com_ content&view =article &id=28&Itemid=228#
6.	JPU	0	1	0	N/A
7.	KSDSU	1	0	1	http://www.ksdsu.edu. in/library.htm
8.	LNMU	1	0	1 / 1	http://lnmu.bih.nic.in/ ibrary.html
9.	MMHAPU	0	1	0	N/A
10.	MU	1	0	1	http://www.magadhuniversity. ac.in/Libraries.php
11.	NIU	1	0	1	http://www.nalandauniv. edu.in/library.htmllibrary.html
12.	NOU	0	1	0	N/A
13.	PU	0	1	0	N/A
14.	TMBU	1	0	1	http://tmbu.org/ centrallibrary.asp
15.	VKSU	0	1	0	N/A
	Total Score	**15**	**08**		

Table 2. Web presence of university libraries

5.3 Native vs. Separate Web presence of university libraries

In order to find out that whether university libraries had a separate web presence in websphere or was linked to the main website of the university analysis was carried out that has been shown in table 3. It can be observed that all the eight university libraries that had web presence had an attached webpage of the university library. Further, no any university library provided a separate web presence apart from the main website of the university.

S.No	Universities in Bihar	Available Library Webpage of universities	Status of attachment of Library Webpage		Individual Overall Points (Separate library website indicator)
			Attached with University website	Separate with University website	
1.	BRABU	1	1	0	0
2.	CNLU	1	1	0	0
3.	CUSB	1	1	0	0
4.	KSDSU	1	1	0	0
5.	LNMU	1	1	0	0
6.	MU	1	1	0	0
7.	NIU	1	1	0	0
8.	TMBU	1	1	0	0
	Total Score 08	08	08	00	

Table 3. Native vs. Separate web presence of university libraries

Funding source for web presence of university

Table 4 shows that in order to ensure the web presence of the universities two universities were sponsored by the central government while 13 were affiliated with the state government.

S.No	Universities in Bihar	Funding organization of Universities website		Individual Points (Governmental Authority indicator)
		Central Government	State Government	
1.	AKU	0	1	1
2.	BNMU	0	1	1
3.	BRABU	0	1	1
4.	CNLU	0	1	1
5.	CUSB	1	0	1
6.	JPU	0	1	1
7.	KSDSU	0	1	1
8.	LNMU	0	1	1
9.	MMHAPU	0	1	1

10.	MU	0	1	1
11.	NIU	1	0	1
12.	NOU	0	1	1
13.	PU	0	1	1
14.	TMBU	0	1	1
15.	VKSU	0	1	1
	Total Score 15	02	13	

Table 4. Funding source for web presence ofuniversity

[N.B. - 1=Each and Every Feature of Checklist as well as Table, 1=Yes and 0=No]

5.4 Presence of information on the web identity of the university

S.No	Features on Website	AKU	BNMU	BRABU	CNLU	CUSB	JPU	KSDSU	LNMU	MMHAPU	MU	NIU	NOU	PU	TMBU	VKSU
1.	History	0	0	1	1	1	1	1	1	1	1	0	1	1	1	0
2.	About University	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
3.	Mission	1	0	0	1	1	0	1	1	1	1	0	1	1	1	0
4.	Location	1	0	0	1	1	1	0	1	1	0	1	1	0	1	0
5.	Sitemap	1	0	0	1	1	1	0	0	1	0	0	1	0	0	0
6.	About Library	0	0	1	1	1	0	1	1	0	1	0	0	1	1	0
7.	Library Hours	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0
8.	Library Staff	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0
9.	Library Section	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
10.	Library Committee	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
11.	Library Rules	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12.	News and Events	1	0	0	1	1	1	1	1	1	1	1	1	0	1	0
13.	Membership	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0
14.	Library Tour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15.	Website in Other Languages	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
16.	FAQ	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0
17.	Frequency of Updating	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0
18.	Date of Update	1	0	0	1	1	1	0	1	1	1	0	0	0	1	0
19.	Contact	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
20.	Feedback	0	0	0	0	1	0	1	1	1	0	0	1	1	1	0
21.	Copyright	1	0	1	1	1	1	0	1	1	1	0	1	1	1	0
22.	Hit Counter	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0
23.	Site Search	0	0	0	1	1	1	0	0	0	0	0	1	0	1	0
Total	23	09	02	06	16	18	10	10	15	11	11	05	12	09	14	00

Table 5. Presence of information on the web identity of the university

In order to ensure that web identity of the university provided the requisite information as commonly preferred by the user an analysis was done of all the websites in relation to the minimal features that should be offered by a website (Table 5). Analysis revealed that out of the 23 features that are inevitable for a library website; CUSB had maximum (18) features followed by CNLU (16) and TMBU (12).

5.5 Availability of library collection on the web identity of the university

Analysis was further carried out to find out if information about the library collection was provided on the library website. Table 6 indicates that CNLU provided a maximum of information related to seven resources followed by MU that provided information of four resources; and at last stood KSDSU and LNMU that provided information pertaining to three resources.

Types of Library Collection		AKU	BNMU	BRABU	CNLU	CUSB	JPU	KSDSU	LNMU	MMHAPU	MU	NIU	NOU	PU	TMBU	VKSU
Books		0	0	0	1	1	0	1	1	0	1	0	0	0	0	0
Journal		0	0	0	1	1	0	1	1	0	1	0	0	0	0	0
Newspaper		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
CD/DVD		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Dissertation		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Projects		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Annual Reports		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Thesis		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Manuscripts		0	0	0	0	0	0	1	1	0	1	0	0	0	0	0
Total	09	00	00	00	07	02	00	03	03	00	04	00	00	00	00	00

Table 6. Availability of library collection on the web identity of the university

5.6 Availability of library services on the web identity of the university

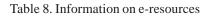| S.No	Library services	AKU	AMU	BNMU	BRABU	CNLU	CUSB	JPU	KSDSU	LNMU	MMHAPU	MU	NIU	NOU	PU	TMBU
1.	Digitization	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
2.	OPAC	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
3.	Loan	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
4.	DDS	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
5.	Reference	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6.	Reading Room	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
7.	Reprography	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8.	Service for researcher	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
9.	Publication	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Federated searching tool	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Total		00	00	00	00	01	05	00	01	00	00	05	00	00	00	00

Table 7. Information on Library Services

Table 7 presents an outlook of the services that are listed on the webpage of the universities. Analysis reveals that out of the 10 selected key services, CUSB and MU enlisted five core services offered by them while CNLU and KSDSU listed only one service on their website.

5.7 Availability ofinformation regarding e-resources on the web identity of the university
Table 8 gives a summary of the various electronic resources that are listed on the webpage of the university. It was found that except CUSB and CNLU none of the universities provided information about their electronic resources on the web platform.

E-Resources	AKU	AMU	BNMU	BRABU	CNLU	CUSB	JPU	KSDSU	LNMU	MMHAPU	MU	NIU	NOU	PU	TMBU	VKSU
E-books	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E-journal	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0
Online database	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Intranet	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Total	04	00	00	00	03	03	00	00	00	00	00	00	00	00	00	00

Table 8. Information on e-resources

5.8 Status of availability of library OPAC on the web identity of the university

Universities in Bihar		OPAC status	Individual Rank Points(Availabilities indicator)
AKU		NA	0
BNMU		NA	0
BRABU		NA	0
CNLU		1	1
CUSB		1	1
JPU		NA	0
KSDSU		NA	0
LNMU		NA	0
MMHAPU		NA	0
MU		NA	0
NIU		NA	0
NOU		NA	0
PU		NA	0
TMBU		NA	0
VKSU		NA	0
Total Score	15	02	

Table 9. Status of Library OPAC

Table 9 represents the library OPAC status of availability and non-availability on the library page cited on the university webpage. It was found that, except CUSB and CNLU none of the universities provided OPAC link on their library webpage.

5.9 Status of availability of library OPAC on the web identity of the university
Table 10 represents the library OPAC functioning status with internet or intranet in the library. It was found that, CUSB and CNLU have functional library OPAC link on intranet and none of the other universities having library OPAC facilities with an intranet. On the other hand, none of these listed (15 universities) having library OPAC link accessible on Internet.

Universities in Bihar	OPAC Link to		Individual Rank Points (Linked to Internet indicator)
	Intranet	Internet	
AKU	NA	NA	0
BNMU	NA	NA	0
BRABU	NA	NA	0
CNLU	1	0	0
CUSB	1	0	0
JPU	NA	NA	0
KSDSU	NA	NA	0
LNMU	NA	NA	0
MMHAPU	NA	NA	0
MU	NA	NA	0
NIU	NA	NA	0
NOU	NA	NA	0
PU	NA	NA	0
TMBU	NA	NA	0
VKSU	NA	NA	0
Total 15	02		0

Table 10. Status of Library OPAC (Link to Internet/Internet)

5.10 Status of availability of digital library on the web identity of the university

	Digital library	Individual Rank Points(Availability indicator)
AKU	NA	0
BNMU	NA	0
BRABU	NA	0
CNLU	NA	0
CUSB	1	1
JPU	NA	0
KSDSU	NA	0
LNMU	NA	0
MMHAPU	NA	0
MU	NA	0
NIU	NA	0
NOU	NA	0
PU	NA	0
TMBU	NA	0
VKSU	NA	0
Total Score 15	01	

Table 11. Status of Digital Library Availability

Table 11shows that theavailability of digital library link on the university webpage. It was found that, only one university, namely CUSB webpage shows the availability of the digital library that is accessible over intranet only.

Application of web 2.0 technologies
None of the universities were using any of web 2.0 features on their sites. Except CUSB that was using content management software (Joomla) all other universities web-identity were written in HTML.

5.11 Rating Scale for Website of Universities Library of Bihar
Using data gathered from the study websites analysis and evaluation checklist, a numeric score was generated for each study website in the study. (Table 1 and 16 points); availabilities of library webpage on university website (Table 2 and 16 points); status of attachment of library webpage and university website (Table 3 and 16 points); funding organization of university website (Table 4 and 16 points); General information of website (Table 5 and 23 points); information about library collection (Table 6 and 09 points); information on library services (Table 7 and 10 points); information on e-resources (Table 8 and 04 points); status of library OPAC (Table 9 and 16 points); status of library OPAC linked with intranet /internet (Table 10 and 16 points); status of digital library availability (Table 11 and 16 points); status of digital library linked with intranet / internet (Table 12 and 16 points); and application of web 2.0 technologies (Table 13 and 04 points); to rank the studies universities library website, the rating scale was designed to rank "Excellent" to "Needs Improvement" based on the five scale below (Table 12).

Range (score)	Rank
121 - 145	Excellent
91-120	Satisfactory
61-90	Average
31-60	Un-satisfactory
0-30	Needs Improvement

Table 12. Rating Scale For Website of Universities Library of Bihar

Finally, the results obtained from the analysis represented in the tables (Table 1-11) were cummulatd together and ranked using the rate scale presented in table 12. Table 3 presents the cumulative report of the ranking of the web-identity of the university libraries in Bihar.

Rank	University
1.	CUSB
2.	CNLU
3.	MU
4.	LNMU
5.	KSDSU
	TMBU
6.	NOU
7.	MMHAPU
8.	JPU
9.	AKU
	PU
10.	BRABU
11.	NIU
12.	BNMU
13.	VKSU

Library Web	Tab.1 (16 Points)	Tab.2 (15 Points)	Tab.3 (08 Points)	Tab.4 (15 Points)	Tab.5 (23 Points)	Tab.6 (09 Points)	Tab.7 (10 Points)	Tab.8 (04 Points)	Tab.9 (15 Points)	Tab.10 (15 Points)	Tab.11 (15 Points)	Total Points (145 Marks)	Grade	Rank
AKU	01	00	00	01	09	00	00	00	00	00	00	11	9	Needs Improveme
BNMU	01	00	00	01	02	00	00	00	00	00	00	04	12	Needs Improveme
BRABU	01	01	00	01	06	00	00	00	00	00	00	09	10	Needs Improveme
CNLU	01	01	00	01	16	07	01	03	01	00	00	31	2	Un-satisfactory
CUSB	01	01	00	01	18	02	05	03	01	00	01	33	1	Un-satisfactory
JPU	01	00	00	01	10	00	00	00	00	00	00	12	8	Needs Improveme
KSDSU	01	01	00	01	10	03	01	00	00	00	00	17	5	Needs Improveme
LNMU	01	01	00	01	15	03	00	00	00	00	00	21	4	Needs Improveme
MMHAPU	01	00	00	01	11	00	00	00	00	00	00	13	7	Needs Improvement
NOU	01	00	00	01	12	00	00	00	00	00	00	14	6	Needs Improveme
PU	01	00	00	01	09	00	00	00	00	00	00	11	9	Needs Improveme
TMBU	01	01	00	01	14	00	00	00	00	00	00	17	5	Needs Improveme
VKSU	01	00	00	01	00	00	00	00	00	00	00	02	13	Needs Improveme

Table 13. Ranking of Universities Library Webpage According to Overall Web Content Scoring Points

Analysis reveals that CUSB ranks the topmost among all the universities in Bihar followed by CNLU, MU and LNMU.

Appendix-A

NAME OF THE UNIVERSITIES IN BIHAR	ABBREVIATION USED	WEB URL	YEAR OF CREATING WEBSITE
Arya Bhatta Knowledge University, Patna	AKU	http://akubihar.org/	2013
Aligarh Muslim University , Kisangang*(EXTEN.CENTRE)	AMU	This extension centre of AMU have not its own university website	NA
Bhupendra Narayan Mandal University, Madhepura	BNMU	http://www.bnmu.in/	NA
B. R. Ambedkar Bihar University, Muzaffarpur	BRABU	http://www.brabu.net/	2005
Chanaklya National Law University, Patna	CNLU	http://www.cnlu.ac.in/	NA
Central University of South Bihar, Gaya	CUSB	http://www.cub.ac.in/	2009
Jai Prakash University, Chapra	JPU	http://jpv.bih.nic.in/	2006
Kameshwar Singh Darbhanga Sanskrit University, Darbhanga	KSDSU	http://www.ksdsu.edu.in/	2008
Lalit Narayan Mithila University, Darbhanga	LNMU	http://lnmu.ac.in/	2005
MaulanaMazharulHaque Arabic and Persian University, Patna	MMHAPU	http://www.mmhapu.bih.nic.in/index.htm	2010
Magadh University, Bodhgaya	MU	http://www.magadhuniversity.ac.in/	2007
Nalanda International University, Razgir	NIU	http://www.nalandauniv.edu.in/	2012
Nalanda Open University, Patna	NOU	http://www.nalandaopenuniversity.com/	2004
Patna University, Patna	PU	http://www.patnauniversity.ac.in/	2006
TilkaManjhi Bhagalpur University, Bhagalpur	TMBU	http://tmbu.org/	2003
Veer Kunwar Singh University, Ara	VKSU	http://vksu.org/	2014

6. Conclusion

In retrospect, it can be concluded that the universities of Bihar have poor representation of their web-identity. In the recent

decades web has evolved to be the biggest platform to interact with anyone that has crossed all the geographical barriers. The universities in Bihar need to pay attention in this regard to uplift the level of education and attract faculty members, research scholars and students across the globe.

7. Summary

Web-identity of universities in Bihar has been neglected domain among the authorities. Universities in Bihar need to pay attention to show their web presence like other institutions and government organizations to improve their global reach. Proper training with regard to designing and developing web portals may be of interest for the staff. Most importantly, the educational institutions have poor support from the government as well as no infrastructure to take such initiatives. Governemnt of Bihar may take initiatives to create a common portal like "Central university portal" to create a common platform that will meet the server, storage and network needs for creating the web-identity of universities in Bihar. Stress over using open source platforms like Joomla, Drupal etc. may be given for creating the websites that are available free of cost and various online tutorials are available to work on these platforms. Moreover, such activities may not be accomplished without the support of staff whose motivation and interest is of prime importance.

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