

DELHI UNIVERSITY LIBRARY WEBSITE: AN EVALUATIVE STUDY

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Abstract *Good content distinguish the website from the search engines as it delivers the right information to satisfy the user information need. The success of website is determined primarily by its content. In this electronic era, websites have become the popular source for communication. Libraries are no exception when it comes to providing the right information at the right time to the right person without any technological barriers. In this study, three webometric techniques have been used to evaluate Delhi University Library Website. These techniques include Web Indicators, Web Analyzer Test Score and Web Impact Factors. Nearly 57 percent of essential indicators were found missing in this website. It has obtained highest score in Information Block i.e. 65 percent and lowest score in Resource Block i.e. 21.42 percent. Seven web analyzers tests score zero these are Twitter, Headings, Facebook, Analytics, Printability, Broken Links and W3C compliance. The results of the study will be beneficial for the librarians for evaluating their library websites. The study has also provided some suggestions how to improve the quality of the library websites. The study concluded that Library Websites play a crucial role in the institution growth therefore there is a need of an hour to raise the quality of these websites by applying various evaluating techniques on them.*

Keywords: *Delhi University Library Website (DULW), Evaluation, Web Indicators (WIs), Web Analyzer Test Score (WATS) and Web Impact Factors (WIFs)*

INTRODUCTION

Delhi University is considered as a premier university of the country and is known for its high standards in teaching and research. It was established in 1922 and has now grown to become one of the largest universities in India with over 80 academic departments and almost equal number of colleges spread across Delhi. It boasts of imparting education to more than 6 lakh students in the formal and non-formal/distant mode. The University has been ranked top most in India by the Centre for World University Ranking 2017. It has been ranked at 8th Position out of all the Universities in the National Institutional Ranking Framework 2017. As of now, the University offers more than 500 programmes of study, which include undergraduate programmes being run by the colleges of the University, an array of postgraduate programmes (including Masters, M.Phil. and Ph.D.), Certificate and Diploma programmes.

DELHI UNIVERSITY LIBRARY SYSTEM (DULS)

Delhi University Library System (DULS) consist of 37 libraries. The DULS is accomplishing its task of reaching to wider academic community. It has advanced web activity with the subscription of as good as 63 high quality electronic database being made available through campus network to teachers, students and research scholars. In addition to this 21 more database are also accessible through e-ShodhSindhu.

DULS also promotes Open Access e-resources. Digital Initiatives of the Library System include Automated Library System, e-ShodhSindhu. Accessible resources for Visually Impaired, Internet Access Facility, Digital Collection of Ph.D. theses and Electronic Databases. As DU caters to the information needs of lakhs of students belonging to diverse academic programmes with formal as-well-as non-formal channels of education, it would be worth analysing the quality and performance of the Delhi University Library System Website or Delhi University Library Website.

DELHI UNIVERSITY LIBRARY WEBSITE (DULW)

Delhi University Library Website is evaluated through three Webometric Techniques. These are Web Indicators (WIs), Web Impact Factors (WIFs) and Web Analyzer Test Score (WATS).

Examine Through Web Indicators

To examine the library websites through Web Indicators the researcher has prepared a single non overlapping list of 105 Web Indicators through two significant studies of Wijayaratne and Wilson (2015). These indicators were divided into 5 major parts. These are Resource, Service, Links, Information, Design & Graphic. May be below indicators are available in DULS but are not mentioned in DULS Website.

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Sr.No.	Web Indicators	Score
	Resource	
1	E-databases such as e-books - e-journals	1
2	Tutorials on Library related topics	1
3	Dictionaries and Encyclopaedias	0
4	Subject bibliographies	0
5	Referencing tool	0
6	Course materials	0
7	Reading list recommended by the faculties	1
8	Library glossary	0
9	Research publications of academic staff	0
10	Past questions papers	0
11	News paper clippings	0
12	New arrival lists	0
13	Provides online reference chat	0
14	Library podcast	0
	Total	3
	Service	
15	OPAC	1
16	Inter library loans service	0
17	Online feedbacks	0
18	Online Book Reservation	1
19	E-mail reference of librarian	1
20	Virtual users training sessions	0
21	Online Orientation session	0
22	Document delivery service	0
23	Digital communication forums	0
	Total	3
	Links	
24	Links to Course program sites	0
25	Link to Parent institution's homepage	1
26	Links to Information manuals	0
27	Free internet resources of general interest	1
28	Links to download necessary software's tool	0
29	Links to Popular Search Engines	0
30	Links to related sites	1
31	Links to OPACs of other libraries	1
	Total	4
	Information	
32	Vision/mission statements	0
33	Floor plan of the library	1
34	Campus site map	0
35	Web masters contact details	0
36	Short biography of the staff members	1
37	Photographs of staff members	1
38	Frequently used sites/ visitor number	1
39	Help guides	1

Sr.No.	Web Indicators	Score
40	Contact Information of the library	1
41	Library opening hours	0
42	Library staff directory	1
43	Copyright statement	1
44	Library Calendar	0
45	Policies, rules and regulations of the library	1
46	Online and in-house facilities	1
47	Library News	1
48	Library History	1
49	FAQ	0
50	Institutions full name	1
51	Library policies	0
	Total	13
	Design & Graphic	
52	Memorable URL	1
53	Website is consistent in layout an organisation	1
54	Hyperlinks identity or describe the targeted web page	0
55	Home page length is within one screenful of information	0
56	Date of last website update is provided	1
57	Avoid the use of flash animation	0
58	Avoid the use of background sounds	1
59	Avoid horizontal scrolling	1
60	Has access the home page from all other pages	1
61	Accessible through Chrome, Firefox	1
62	Provides text-only options for pages	1
63	Uses descriptive heading's, titles and tabs	1
64	Uses headings tag consistently	0
65	Functional through the use of a keyboard	1
66	Provides multilingual access options	0
67	Do not blinking, flashing or moving text or images	0
68	Write abbreviations fully in the first instance	0
69	Don't use underline unless it is a hyperlinks	0
70	Use high contrast of text and backgrounds	0
71	Avoid long text blocks	0
72	Headlines that support scanning	1
73	Use left justify text and headlines	0
74	Strong visual identity	0
75	Use visual consistency across all pages	0
76	Include links to return library homepage	1
77	Well designed error screen	0
78	Consistence navigation elements	0
79	Internal search engine	1
80	Short menus consisting 5-7 links	1
81	Multiple access for services/facilities	1
82	Use navigational aids	0
83	Relative font size	0

Sr.No.	Web Indicators	Score
84	Headings for table	1
85	Large graphics (more than 200kb)	1
86	Avoid non standard html codes	1
87	Headlines that support scanning	1
88	Do not present information through colour	0
89	Avoid use of titles like "click here" and "see more"	0
90	Use large clickable areas or hotspot	0
91	Print friendly function	0
92	Avoid italics for large text blocks	1
93	Line length within 10-12 words per line	0
94	Font type "Georgia" or "Verdana" for Web Pages	0
95	Use Graphics sparingly	0
96	Font type "Times New Roman" for heavy text	0
97	Include Anchor links for important links	1
98	Client side image map	0
99	Homepage within (800*600pixcle)	0
100	Content of pages does not require scrolling	0
101	Sufficient space for links	0
102	Leave space between letters of acronym	0
103	Limit page to 200kb of graphics	1
104	TARGET - main arguments to link tags	0
105	Navigation bar	0
	Total	22

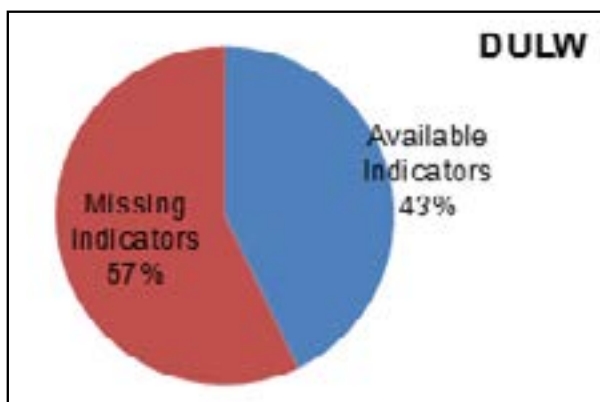


Fig. 1: Status of Total Web Indicators of DULW

Fig. 1 brings the web indicators score for Delhi University Library Website (DULW). Out of 105 web indicators, 45 (43 percent) are available and 60 (57 percent) are missing from DULW.

Fig. 2 highlights the scores of five different blocks of DULW. Information Block has scored the highest with 65 percent. It includes the floor plan of the library, short bibliographies and photographs of staff members, visitor's number, etc. Though

campus sitemap, web masters contact details, availability of opening hours, FAQs, etc. are missing from DULW. The second highest score is of Links Block with 50 percent. It is composed of link to parent institution's homepage, links to OPAC of other libraries, etc. But links to study program site, links to information manuals such as library brochure, etc. are missing from DULW. The third position is secured by Design & Graphics Block with the score of 40.74 percent. It includes memorable URL, DULW is consistent in layout, date of last DULW update, accessible through Chrome, etc. though homepage length is within one screenful of information, avoidance of use of animations, etc. are not available on DULW. Next block is Service Block with 33.33 percent. It includes online book reservation, email reference of the librarian, etc. although virtual users training session, online feedback and digital communication forums are not included in DULW. The last position among the 5 blocks is Resource Block with 21.42 percent. It includes e-databases, e-books, e-journals, reading list recommended by faculty, etc. But newspaper clippings, library podcast, online reference chat, new arrival lists, etc. are missing from DULW.

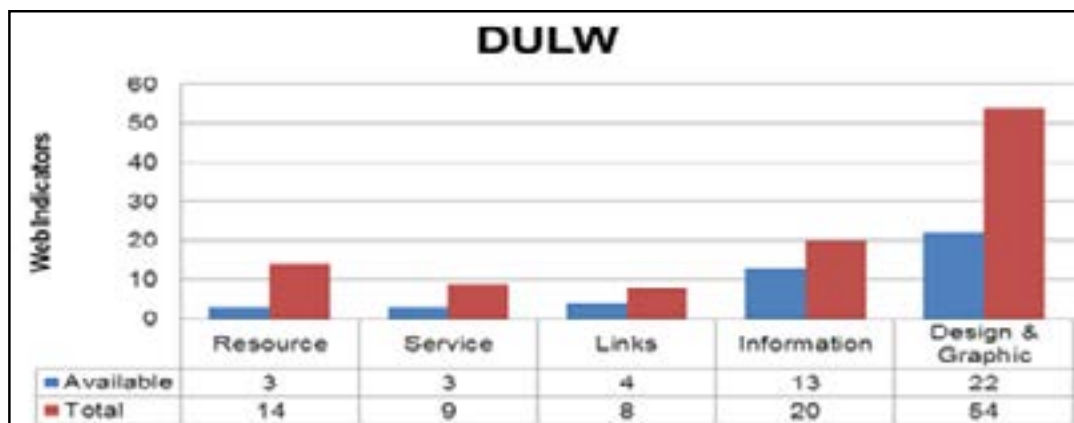


Fig. 2: Status of Available Web Indicators of DULW

Web Analyzer Test Score of DULW

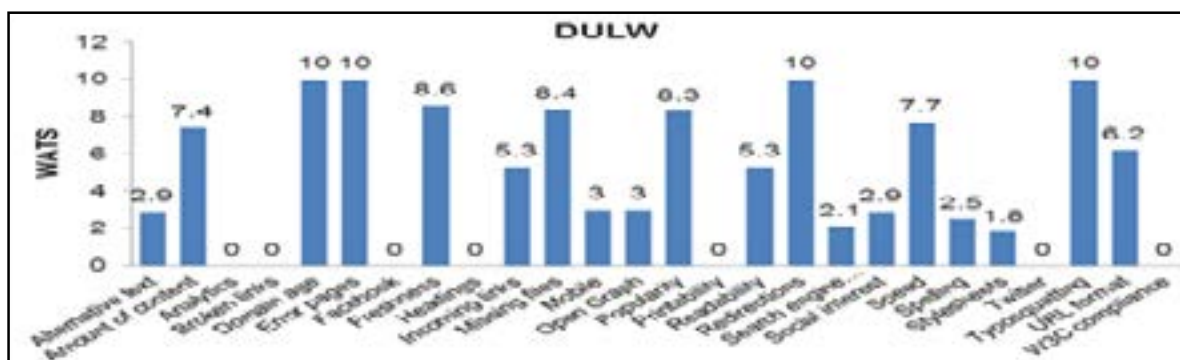


Fig. 3: Status of WATS of DULW

Fig. 3 represents the distribution of WATS of DULW. Out of 26 tests, DULW has scored highest in 9 tests namely domain age; the amount of content, error pages, etc. It has scored average in 3 tests like readability, incoming links, etc. It has scored low in 14 tests and these are W3C compliance, alternative text, analytics, etc. The score from 260 is 115.4 (44.38 percent). 100 pages of DULW have been tested on 15th January 2018. DULW is not using any recognized analytics software. 89 percent of pages are not using well defined headings. 3.2 percent headings are incorrectly defined. 70 percent of DULW is written using unspecified HTML and 30 percent of DULW is written using HTML4. 81 percent of the DULW is using tables for layout. 19 percent of the DULW is using CSS and 5 percent are using external style sheets. Very few pages of DULW are traced clearly in search engine results. There are 384 potential spelling errors on DULW. 67.4 percent of images do not have alternative text. DULW is not using any open graph tag. It is not optimized for mobile and tablet devices. 155 other websites are linked to DULW. Out of 934 links tested by Sitebeam and 56 external broken links are noticed. It takes 2.9 seconds to download and 0.4 seconds to upload. It is ranked

7791st in the world for popularity in Alexa. 7 missing files are spread over 7 pages. DULW is updated after every 4.3 weeks. The domain age is 12.9 years. It is not optimized for printing. It has no Twitter account but 15 pages of DULW are shared on Facebook.

Examine DULW Through Web Impact Factors

Web Impact Factor, Revised Web Impact Factor and Overall Web Impact Factor of DULW have been calculated with the help of web search engine i.e. Google using the Boolean Operators “OR”, “NOT”, “AND”. All three Web Impact Factors have been calculated on 15th January, 2018.

WIF served as an indexing tool where the ratio of links and web pages is initiated. There are three types of WIFs based on different types of links. These links are as follows:

- *External or Out-Links*: External or Out-Links are hyperlinks that target any domain other than the domain the link exists on the source. If another website

links to existing website this is considered as external or out-links to that websites.

- *Back or In-Links*: Back or In-Links are incoming hyperlinks on existing website to another website.
- *Self-Links*: Self-Links are links to the web page itself. Thus, self-links are links that link from one page to another page on the same website.
- The three types of WIFs are as follows.
- $WIF = \frac{\text{Total link pages (all in-links and self-links pages)}}{\text{web pages}}$

- Revised WIF (R-WIF) = $\frac{\text{In-links pages}}{\text{web pages}}$
- Overall WIF (O-WIF) = $\frac{\text{Self-link pages}}{\text{web pages}}$

Google search engine is used to collect data .i.e. a number of web pages, the number of self-links and number of in-links.

WP (Web Pages) = Total number of web pages extracted from Google for example domain.

SL (Self-Link) = Number of self-links will be extracted from Google for example link domain.

IL (In-Link) = Number of in-links will be extracted in Google for example link domain.

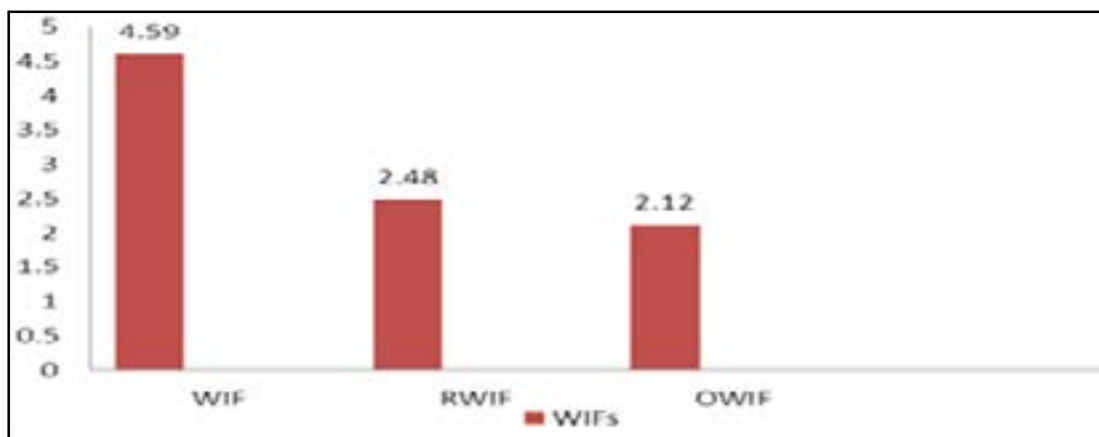


Fig. 4: Status of WIFs of DULW

Fig. 4 represents that DULW has WIF score as 4.59, RWIF score as 2.48 and OWIF score as 2.12.

W3C compliance, etc. It should involve in providing access to information through various quality web indicators which should be user friendly. These indicators should have user acceptance and usability.

COMPOSITE RANK OF DULW

Table 1: Composite Rank of DULW

	WI	WATS	WIF	RWIF	OWIF	Total	Mean score
DULW	45	115.4	4.59	2.47	2.12	169.6	33.9

Table 1 shows the Composite Rank of DUL where WI score is 45 out of 105, WATS is 115.4 out of 260, WIF score is 4.59, RWIF score is 2.47 and OWIF score is 2.12. So, the total score of all the five evaluative techniques is 169.6 and the Mean Score is 33.9.

DISCUSSION

While evaluating Delhi University Library Website, it was revealed that this website needs a great amount of improvement. Nearly 60 (57 percent) essential indicators were found missing in this website. Some web analyzers tests score zero these are analytics, printability, Twitter, Headings,

SUGGESTIONS

- Web pages should be written in proper html based texts so that search engines are able to scroll the website easily and the overall visibility of the website will increase.
- Links should be arranged in various broader categories so that users can access the pages easily. Broken or duplicate links should be avoided. This will improve the rank of the library website.
- The library website should be tested by Web Analyzer on regular intervals.
- Approval for updating of library website process should be easy.
- Required add-ons and extensions should be present in the library website.
- Library websites should be operational on mobiles and tabs, saving time of the user and also making it more user friendly in latest IT environment.

CONCLUSION

Delhi University Library Website accomplishes the vision and mission of Delhi University. Still 57 percent indicators were found missing from its library website. Library websites also provide a unique method for the voluntary disclosure of information under Section 4 (1) of Right to Information (RTI) Act, 2005 through which proactive disclosure of information can be made with ease. The study concluded that Library Websites play a crucial role in the institution growth therefore there is a need of an hour to raise the quality of these websites by applying various evaluating techniques on them.

ACKNOWLEDGEMENT

I would like to express my special thanks of gratitude to Jessica Chambers from Sitebeam for facilitating the access of Sitebeam Analyzer.

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Delhi University Library System (DULS) - University of Delhi (n.d.). Retrieved January 15, 2018, crl.du.ac.in/