

USE AND STATUS OF HIGHER EDUCATIONAL DIGITAL INITIATIVES IN UNIVERSITY: A WEBOMETRIC ANALYSIS

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ABSTRACT -

The ocean of information is very large. Everyday new information is coming in different forms. With the advent of digital information, a fully updated web platform is needed also for its presentation and use. The website is the show window of any institution in higher education. The main objective of this paper is to see the status of digital initiatives in higher education on the university's website through Alexa tool and checklist as well as to create awareness for the optimum use of these. The effort to provide all information on one platform has been done by MHRD (Ministry of Human Resource Development) through a digital initiative. All these projects and programmes were started by MHRD with the aim to improve quality in education and research. This study offers how a website can be made more effective and inspiring for using digital resources. This paper explores the practices of universities to fill the gaps present in required and available in using digital initiatives in education.

Keyword : Alexa, Digital Initiatives, MHRD, Webometric, Webometric Analysis, Higher Education

INTRODUCTION

Today websites have become an indispensable part of communication and are used as an instrument to provide services to their users. World Wide Web (WWW) is a web, which can be called a system of information. This contains the URL of each document and other resources. Webometric analyse quantitatively the number and type of hyperlinks available at the WWW. The webpage size and visibility of any university website is measured for webometric ranking. Size means the number of webpages and richfiles available on the university's website, and the visibility is measured by the number of links with outside documents or information. Relevant information can be linked to rank promotion from the bottomless information available on the Internet.

The website has a huge role in teaching, research and technology. Through which information can be presented. Use of information is related to its presentation. Better and easy presentation will increase the use of information and promote the ranking of website in global level. Rankings can be promoted with the uploading of different types of content. Webometrics ranking promotes the quality of research and education in academic institutions through various strategies such as collaboration, marketing and increasing scholarly research publications.

REVIEW OF LITERATURE

Stephen (2019) analyzed the websites of Central University of North Eastern Region by Alexa Internet Tool. The purpose of which was to evaluate that website and see the importance. The study found that NEHU and TU have the best traffic rank 8484 and 8511. Nagaland University has the most daily average page views 4.1. Sikkim University is the most upstream site with 55.7%. Sikkim University's bounce percentage is the most 42.50. This shows its weak performance.

Sapna Rani and Pyare Lal (2018) conducted a webometric analysis to see the status in ICT of the State Health Science University of India. Data collected by Alexa Traffic Rank tool and Google Page Rank. Google Search Engine is used to view PDF, DOC files. It was found that Dr NTR University of Health Science and Sri Venkateswara Institute of Medical Science were on top. Nizam Institute of Medical Science of Telangana is ranked first in the rich file. This study present solutions to overcome the obstacles encountered in improving the website. So that the website have impactful and everyone's needs are fulfilled.

Verma and Brahma (2017) conducted a webometric analysis of nine library consortiums in India with the aim that the consortium gives complete information on its website. As information is increasing every day. That is why if these consortiums give complete information from their website. Then they can give great benefit to the field of education. For this, they checked the impact factor of websites of these consortium's total webpages, domain authority, equity links, internal and external links by open site explorer. Based on the analysis of the data, it is found that the eShodhSindhu and DelCon are most famous. eShodh Sindhu has a higher domain authority of 56 (16.61%), page authority 51 (21.33%), and DelCon has higher linking root domains with 11RDs. The Study shows that everyone can be benefited more by joining these consortiums together.

OBJECTIVES OF THE STUDY

1. To identify the use of digital initiatives of Higher Education on university website.
2. To highlight the present status of digital initiatives of Higher Education in university website.
3. To develop the awareness about these digital initiatives.
4. Analysis the URL of State and Central University of Haryana and digital initiatives websites
5. To see the time on site, link, and daily view per visitor of digital initiatives websites

SCOPE OF THE STUDY

Only academic and special university particularly of science and technology of Haryana and portals

of digital initiatives of Higher Education have selected as the sample.

METHODOLOGY

The present study analyse the website of state and central university of Haryana with the help of Alexa and self prepared check list. Various indexes have selected for the effective

webometric analysis i.e webpage, links, view a day, time on site, rank, search traffic, bounce rate and top keywords etc. The list of state and central universities and their URL were taken from the UGC website (<http://www.ugc.ac.in>). All process of data collection was completed on January 2021 in one day. The collected data has been refined, tabulated, analyzed, and interpreted to search out meaningful findings and conclusion.

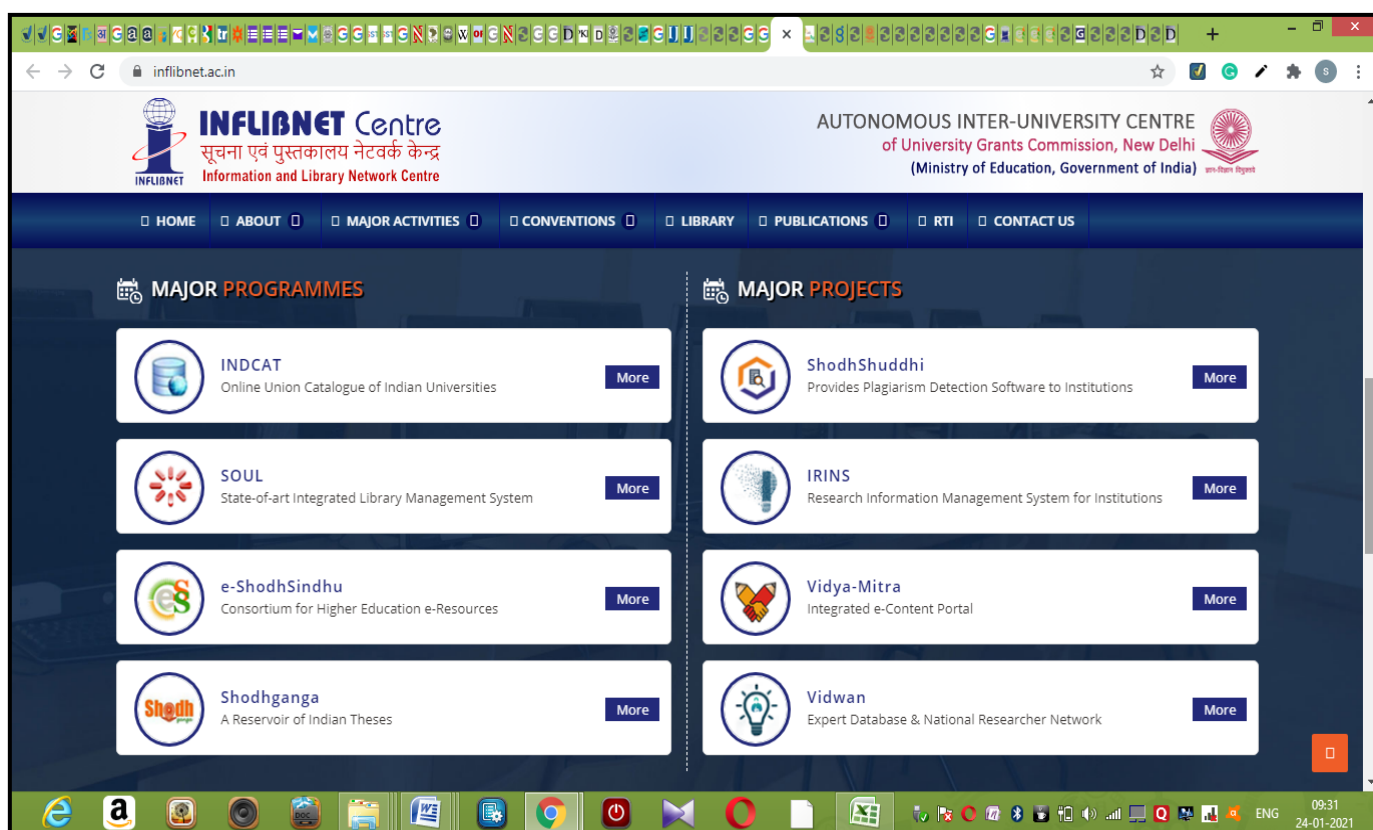
Table 1: Selected Universities to study

S.N	Full Name of University	Abbreviation	URL of University	Established
1	Chaudhary Devi Lal University	CDLU	http://www.cdlu.in	2003
2	Choudary Charan Singh Haryana Agricultural Univeersity	CCSHAU	http://www.hau.ac.in	1970
3	Guru Jambeshwar University of Science and Technology	GJU	http://www.gju.ernet.in	1995
4	Kurukshetra University	KUK	http://www.kuk.ac.in	1956
5	Maharishi Dayanand University	MDU	http://www.mdurohtak.ac.in	1976
6	Ch. Bansi Lal University	CBLU	https://cblu.ac.in/	2014
7	Chaudhary Ranbir Singh University	CRSU	http://www.crsujind.org	2014
8	Central University, Haryana	CUH	https://cuh.ac.in/	
9	Bhagat Phool Singh Mahila Vishwavidyalaya	BPSMV	http://bpsmv.digitaluniversity.ac/	2006
10	Deen Bandhu Chhotu Ram University of Sciences & Technology	DCRUST	http://www.dcrusm.org	2006
11	Pandit Deen Dyal University of Health Science	PDDUHS	Not has infrastructure	2016
12	J. C. Bose University of Science & Technology, YMCA	YMCA	http://ymcaust.ac.in	2009
13	Pt. Bhagwat Dayal Sharma University of Health Sciences	PBDSUHS	http://www.uhsr.ac.in	2008

Table 2: Portals of Digital Initiatives

S.N.	Digital Initiatives	Website
1	INFLIBNET(eShodhSindhu, Shodhganga, Shodhshudhi, Vidwan, VidyaMitra, ePGPathShala, ShodhShudhi)	http://inflibnet.ac.in
2	SWAYAM	http://swayam.gov.in
3	SWAYAMPBABHA	http://swayamprabha.gov.in
4	NDLI(National Digital Library of India)	http://ndl.gov.in

Figure 1: INFLIBNET with their PROGRAMMES and PROJECTS



DATA ANALYSIS AND RESULT

Frequency, Percentage, was used to analyze the data. Data was analyzed by using application software MS Excel and SPSS.

Table 3: Cumulative data obtained from Alexa

University	Before 90 days	Global Rank	India	Visitors from India	Daily Time on Site	Daily Page Views per Visitors	Search Traffic	Bounce Rate	Total Site Linking
CDLU	229936	303883	73766	100.00%	02:07	2.5	81.8	37.8	109
CCSHAU	235062	215425	55696	96.80%	03:33	3.5	8.3	35.7	88
GJU	130665	106505	14362	99.3	03:02	2.9	61.3	35.3	359
KUK	26473	32927	3220	96.20%	06:51	5.2	34.6	25.3	723
MDU	31823	27721	1879	99.30%	05:52	4.7	37.7	33.6	146
CBLU	364118	249165	32835	100.00%	02:43	2.8	45.7	29	40
CRSU	151376	61732	10294	100.00%	01:24	1.8	33.3	58.4	160
CUH	374161	141786	44259	100.00%	01:56	2.3	60	46.4	165
BPSMV	949838	1325889		100.00%	02:17	2	0	64.3	166
DCRUST	287535	260952	47713		02:41	2.5	95.5	48.3	211
YMCA	705717	557778	43664	100.00%	02:48	3	25	48.6	116
PBDSUMS	97691	84626	10238	100.00%	02:15	3.7	15.2	29.4	227

Bounce Rate: It refers to how many users have opened and closed the website's homepage only once. The highest bounce rate shows the weak performance of that website. BPSMV shows

highest bounce rate of 64.3% and CRSU with 58.4%. 25.30% is the lowest bounce rate of KUK.

Figure: 2 Bounce Rate of all selected university

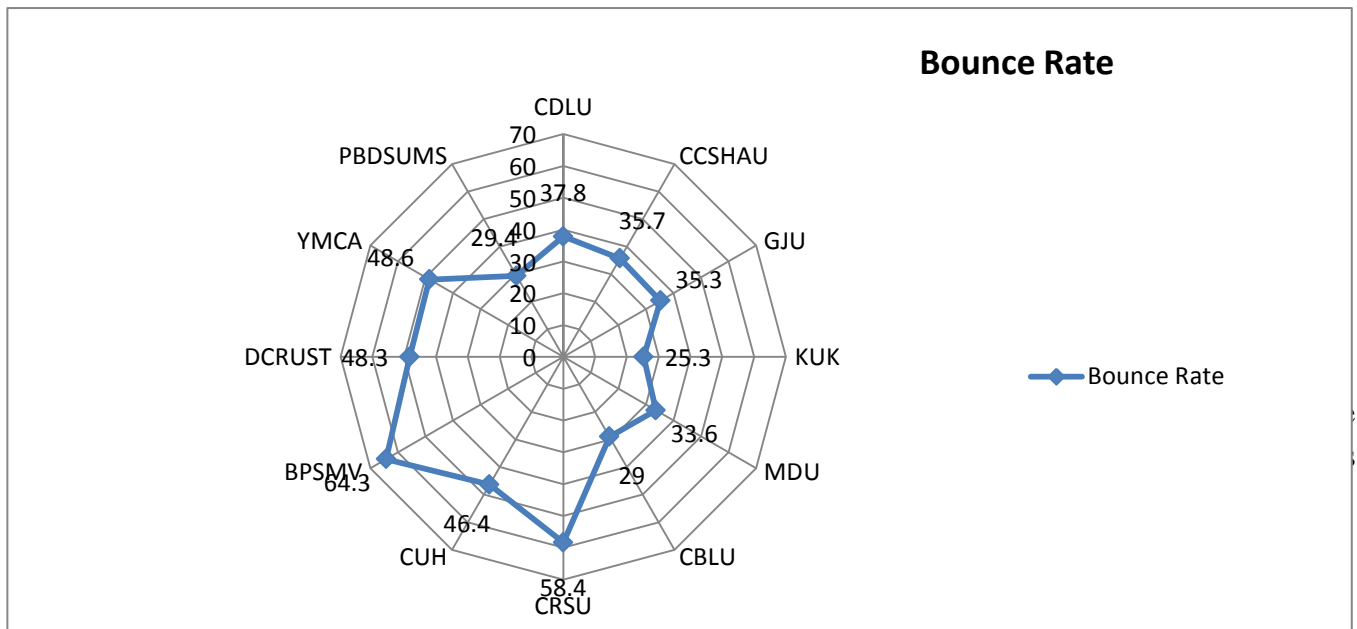
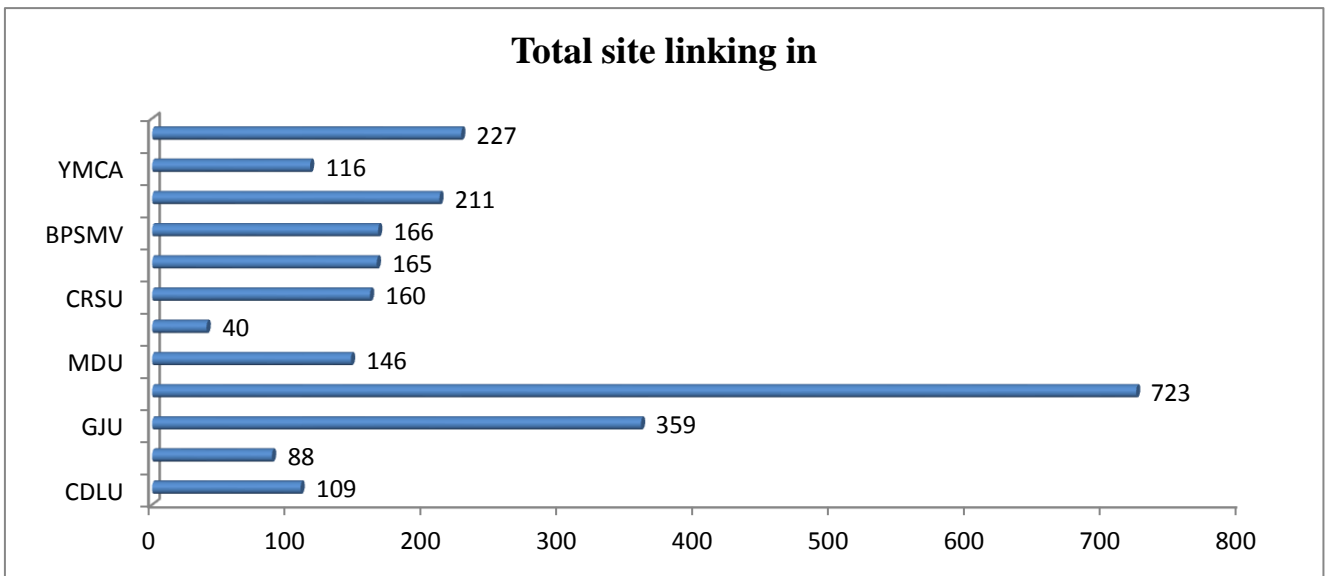


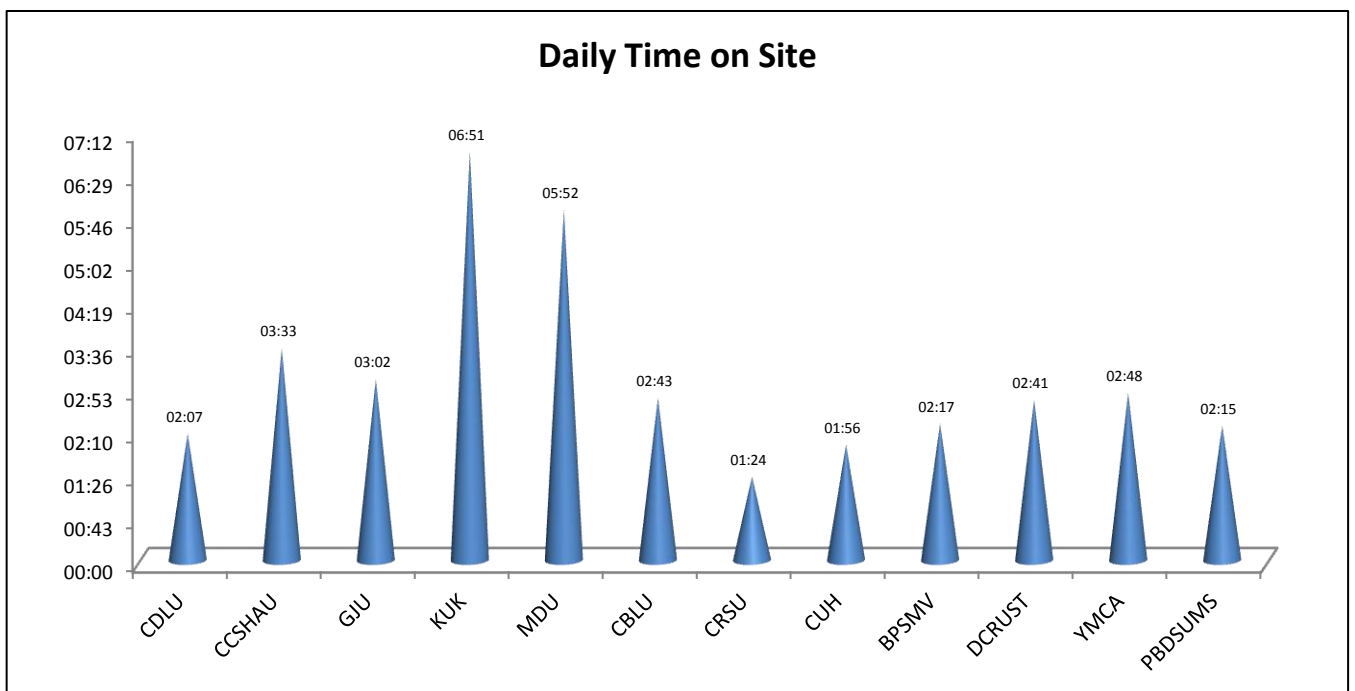
Figure 3: Total site linking of all selected university



Daily time on site: According to the collected data, the time spent by the users on the KUK University website was the highest 6:51 minutes and followed by the users of MDU 5:52 minutes. The shortest time is spent to the CRSU website

with 1:24 minutes and 1:56 minutes on CUH. In this short time a lot cannot be search. These can be bounce rate users. Surfing time range of university website is 1:24 to 6:51 minutes.

Figure 4: Total site linking of all selected university



Daily page views per visitors: No matter how many times same user views a same page in the same day on the same site, they get only one point. In this way, the average number of pages viewed by a user is based on the unique user's

page usage. When checked by Alexa, the figure 4 shows that KUK has a daily average page view of 5.2, followed by MDU with 4.7 and CRSU has the lowest Page view 1.8 and BPSMV 2.

Figure 5: Daily page views by per visitor of all selected university



Top Keywords: Most of the websites were opened for viewing results, datesheet, etc. in all

the universities. Not for accessing digital initiatives and libraries.

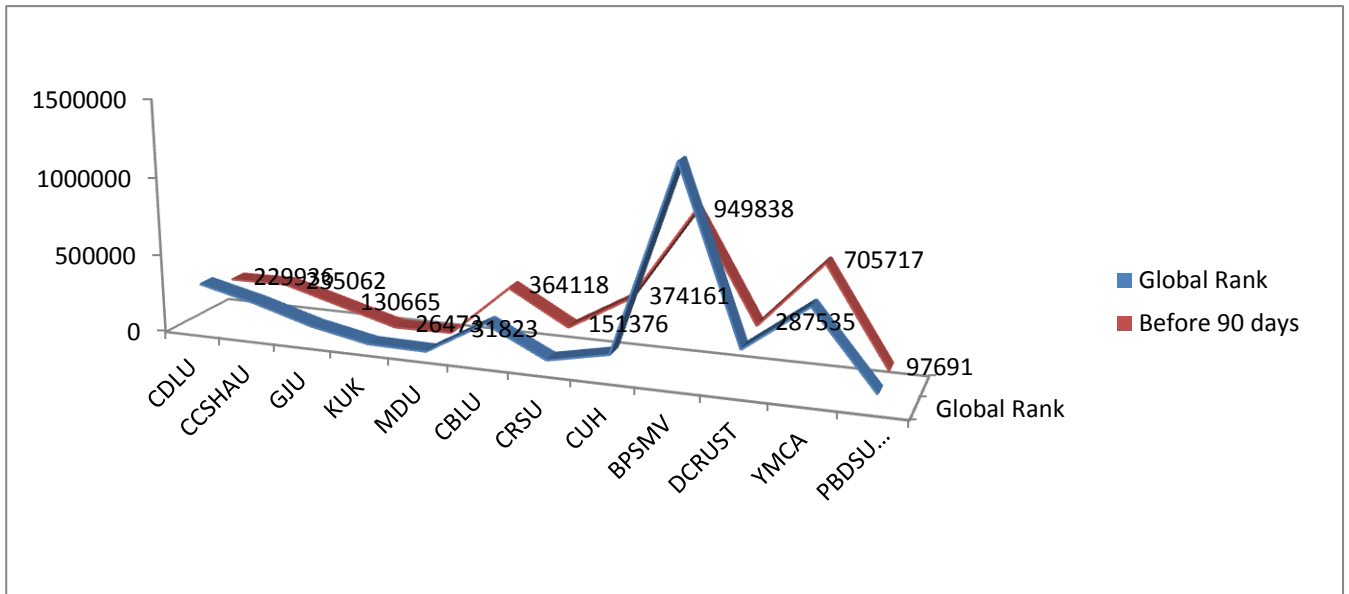
Table 4: Top keyword used to access all selected university

University	Top Keyword
CDLU	cdlu, chaudhary devi lal university, cdlu digital university, cdlu result
CCSHAU	hau, ccs hau, ccs hau admin, hau recruitment, ccshau
GJU	gju, guru jambheshwar university, guru jambheshwar university of science and technology, gju result, guru jambheshwar university hisar
KUK	kurukshetra university, kuk, kuk result, kuk student login, kurukshetra university address
MDU	mdu, mdu result, mdu rohtak, mdu notice, maharshi dayanand university
CBLU	cblu, chaudhary bansi lal university, cblu recruitment, cblu datesheet, cblu result
CRSU	crsu, chaudhary ranbir singh university, crsu jind, vrsu datesheet, crsu result
CUH	central university, cuh, haryana university, centrauniversity
BPSMV	bhagat phool singh mahila university, bps khanpur, khanpur university, bhagat phool
DCRUST	dcrust, deenbandhu choturam university, dcrust edp, dcrust murthal, dcrustm ago
YMCA	bose institute, jagadish chander, jagadish chander bose institute,
PBDSUMS	uhsr, pgms rohtak. uhsr haryana, uhsr result, pandit bhagwat dyal sharma

Ranks: are given on the basis of daily visits and daily page views. Out of thirteen, users accessing the nine university website are from India. The lower the rank of any university website, then that university website is more important. MDU's rank is the lowest at the global (27721) and India level (1879). KUK has the rank on global (32927) and

Indian level (3220). BPSMV has the highest rank 1325889 on global level, which has also increased compared to the last three months. While MDU's rank has decreased with 31823 compared to the last three months, its popularity has increased.

Figure 6: Rank of all selected university



Search Traffic: DCRUST (95.5) and CDLU (81.8) have the highest search traffic and the

search traffic on the website of CCSHAU (8.3) and PBDSUHS (15.2) is very low.

Figure 7: Search traffic of all selected university

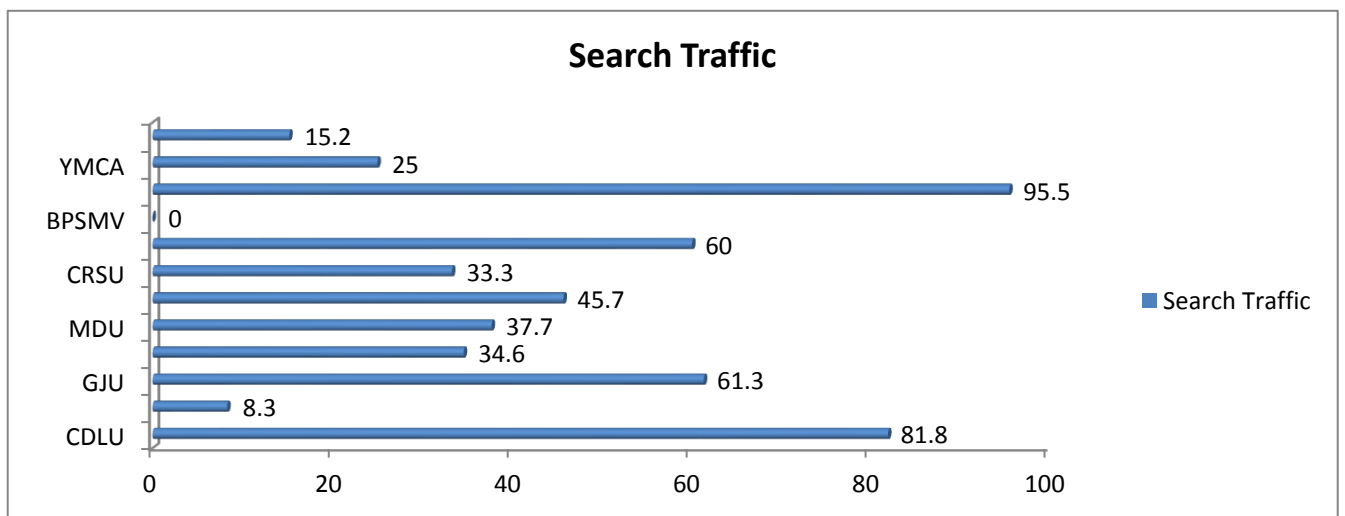


Table 5: Cumulative data obtained from Alexa of digital initiatives websites

Digital Initiatives	Before 90 days	Global Rank	India	Visitors from India	Foreign	Daily Time on Site	Daily pageviews per visitors	Search Traffic	Bounce Rate	Total site linking in
INFLIBNET	5370	8208	1428	84.70 %	15.30 %	4:18	3.28%	71.70 %	53.80 %	3177
SWAYAMPRA BHA	31355	373123	68931	100.00 %		4:40	4.30%	.....	34.60 %	114
SWAYAM	18791	20491	1838	98.80 %		2:24	2.1	32.40 %	30.30 %	198
NDL	785720	1292176	....	....		9:45	9	.....	....	54

INFLIBNET	shodhganga, nlist, education,
SWAYAMPRA BHA	swayamprabha, swayam prabha, swayam, swayam login,
SWAYAM	....
NDL	....

All the programs have been started by MHRD via INFLIBNET. The table shows that it has the highest bounce rate. Yet on average 4:18 minutes of time is spent on it. Its links have the highest 3177, which shows its reputation and popularity. It is also used in abroad. Its global rank 8208 and Indian rank 1428 is very good that shows website is fully developed with all appropriate contents. While the total number of link 114 is very less of

Swayamprabha. Global rank and India rank is very high, which is not good. Looking at the top keywords used for INFLIBNET, SWAYAMPRA BHA, SWAYAM and NDLI access shows that Shodhganga and eShodhSindhu are used a lot. And the links of the NDLI are 54, and SWAYAM has 198, despite being less, these are popular. An average of nine pages is viewed per day and a visitor uses it for 9:45 minutes

Table 6: Usability features of Digital Initiatives' Higher Education Website

	SWAYAM	SWAYAMPRA BHA	IndCa t	NDL	SHODH GANGA	SHODH SINDHU	SHODH SHUDHI	ePGPat hShala	VID WAN	VIDY AMIT RA	Freq uenc y (%)
Contact us Link	1	1	1	1	1	1	1	1	1	1	10(100%)
Guidelines	1	1	1	1	1	1	1	1	1	1	10(100%)

Easy Registration	1	1	1	1	1	1	1	1	1	1	10(100%)
Members	1	1	1	1	1	1	1	0	1	1	9(90%)
E-Resource Direct Link	1	1	1	1	1	1	1	1	1	1	10(100%)
Advanced Search	1	1	1	1	1	1	1	1	1	1	10(100%)
Relevancy	.gov	.gov	INFLIBNET of UGC	.gov	INFLIBNET of UGC	INFLIBNET of UGC	INFLIBNET of UGC	INFLIBNET of UGC	INFLIBNET of UGC	INFLIBNET of UGC	10(100%)
Website update date	1	0	1	1	1	1	1	1	1	1	9(90%)
About that initiatives	1	1	1	1	1	1	1	1	1	1	10(100%)
Services	1	1	1	1	1	1	1	1	1	1	10(100%)
Feedback	0	1	1	1	1	1	1	1	1	1	10(100%)
FAQ	0	1	1	1	0	0	0	0	0	0	3(30%)

The websites of all these initiatives are fully updated. Being user friendly, anyone can use them easily. Full instructions and guidelines are given for the use of each initiative. Registration does not require much effort. This link is easily available on the home page. Whatever the resources are being provided by these portals. They can also be accessed with one click. Advanced search is provided on IndCat, VIDWAN etc. The website is constantly updated. In case of any problem, contact or FAQ facility can be used freely.

All these projects and programmes were started by MHRD with the aim to improve quality in education and research. And looking at the results shows that everyone should take advantage (get benefited) by using of these digital initiatives of higher education. For this purpose, these knowledge portals have been fully developed. But there is a need to use them more and more. For this, it is important that universities and colleges should emphasize on their use.

Table 7: Usability feature of Digital Initiatives content on University websites

	CD LU	CCSH AU	GJ U	K U K	CB LU	CR SU	CU H	BPS MV	M DU	DCR UST	YM CA	PBDS UMS	Frequency(%)
Contact us Link	0	0	0	0	0	0	0	0	0	0	0	0	0(0%)
Guidelines (How to use it)	0	0	0	0	0	0	0	0	0	0	0	0	0(0%)
About digital initiatives	0	0	0	0	0	0	0	0	0	0	0	0	0(0%)
Committee	0	0	0	1	0	0	0	0	0	0	0	0	1(8.33%)
Direct Link with digital initiatives	1	0	1	1	1	1	1	1	1	0	1	0	9(75%)
Search	1	1	1	1	1	1	1	1	1	1	1	1	12(100%)
Homepage	0	1	1	1	1	0	1	1	1	0	0	0	7(58.33%)
Library webpage	1	0	1	1	0	0	1	1	1	0	1	0	7(58.33%)
Website update	04-01-2021	04-01-2021	0	0	2021	2020	0	0	0	21-05-2019	05-01-2021	24-04-2017	7(58.33%)
Services	0	0	0	0	0	0	0	0	0	0	0	0	0(0%)
Feedback	0	0	0	0	0	0	0	0	0	0	0	0	0(0%)

There should be optimum use of the e-resources provided by digital initiatives. Therefore, the survey of all the university's websites was done on the basis of a checklist for the purpose that the university has given where, how and how much space on their website for the use of the sources given by the digital initiative. No university has given rules and guidelines to use it. And 75 percent of the universities have given direct links for using various projects of digital initiative on their website.

And 58.33 percent of the universities have given access to digital initiatives through direct link from home page. In which KUK has reported only the meeting held for digital initiative at the university by linking digital initiative on the homepage. And 58.33 percent of the universities have given access from the webpage of library especially for eShodhSindhu. The website of seven universities is being updated almost continuously. And some universities are neither updating their website quickly nor do they have any attention towards digital initiatives.

Table 8: Digital Initiatives content on University websites

	CD LU	CCS HAU	GJ U	K U K	CB LU	CR SU	C U H	BPS MV	M DU	DCR UST	YM CA	PBDS UMS	Frequ ency (%)
SWAYAM	1	1	1	0	1	0	1	1	1	0	1	0	8(66.6 7%)
SWAYAMP RABHA	1	0	0	0	1	0	1	0	1	0	0	0	4(33.3 3%)
NDLI	1	0	1	0	1	0	1	1	1	0	1	0	7(58.3 3)
IndCat	0	0	0	0	0	0	0	0	0	0	0	0	0
eShodhSindh u	1	0	1	1	1	0	1	1	1	0	1	0	8(66.6 7%)
Shodhganga	1	0	1	0	1	0	0	0	1	0	0	0	4(33.3 3%)
ShodhShudhi	0	0	1	0	0	0	0	0	0	0	0	0	1(8.33 %)
ePG- PathShala	1	0	1	0	1	0	1	1	1	0	0	0	6(50%)
VIDWAN	0	0	0	0	0	0	1	0	1	0	0	0	3(25%)
VIDYAMIT RA	0	0	0	0	0	0	0	0	1	0	0	0	1(8.33 %)

By analysis of website, which digital initiatives have been given on the website of the university, it is found that eight universities have given a link on their website for SWAYAM, and eShodhSindhu. Following this, seven universities have given link for NDLI, and six for ePG-Pathshala, four for SwayamPrabha and Shodhganga. Whereas there is no focus on IndCat, VIDWAN (1) and VidyaMitra (1).

INTERPRETATION

On the basis of Alexa results, it can be said that KUK and MDU's website has been used more. But by looking at the used top keywords, it shows that these universities's website has been used repeatedly to see the examination, results, datesheet, prospectus etc. The top keyword search shows for which purpose user accessed the website. The time on site, top keywords, and daily page view can be used to analyze that what information user accessed from the website and for how long. The resources provided by digital initiatives or libraries are not being accessed on these universities.

Alexa can analyze domain only, not of subdomain and particular webpage. Hence, the website of VIDWAN, VIDYAMITRA, e-ShodhSindhu etc. is all the projects of INFLIBNET (UGC) are not analyzed separately. INFLIBNET website is very strong. As keywords shows, Shodhganga has a lot of use. Due to which this website becomes stronger. Therefore, its rank is also right at the global level. It is being liked not only in India but also abroad.

On the basis of results of the checklist it can be said that all the websites are giving all systematic information and are very strong. But if looking at

the efforts on digital initiatives, it can be said that only a few universities have given a link to the Digital Initiative on their website for access. But the necessary related information has not given by them. And no effort has been made to create awareness for the use of resources given by digital initiatives of higher education.

FINDING AND SUGGESTION

1. To strengthen university websites, we will have to give full information related to digital initiatives in higher education in detail.
2. Workshops and orientation programs should be organized by the library for increasing use of it.
3. Efforts should be made to create awareness among researchers, faculty and students.
4. Any information should be provided on website in a simple, user friendly, attractive, informative way.

CONCLUSION

All these digital programmes of INFLIBNET such as eShodhSindhu, Shodhganga, ePG-PathShala, URKUND is being given to the users in the university through the library very long ago. But to increase their usage and create awareness among users, improvement in website is required. Status and usage of universities website are affected by the web presence of students and staff. The results show that the website of these universities were accessed for the information related to the results, examination, datesheet and admission etc., not for the resources provided by the digital initiative. Satisfactory information has not been received on various university website about digital

initiatives. The more information is on the website, the more use the website will have.

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