

# **NIRF Ranking 2021: A Webometric Analysis of Top 10 University Websites of India**

**Jitendra Meghwal<sup>1</sup>; Kaveri Joshi<sup>2</sup>;  
Naveen Chaparwal<sup>3</sup>; Dr. P.S. Rajput<sup>4</sup>**

Department of Library and Information Science, Mohanlal Sukhadia University, Udaipur, Rajasthan, India <sup>1,2,3</sup>; Assistant Professor & In-Charge Head, Department of Library and Information Science, Mohanlal Sukhadia University, Udaipur, Rajasthan, India<sup>4</sup>

*jitendrameghwal0204@gmail.com, kaverijoshi4@gmail.com, naveenchaparwal56@gmail.com, drpsrajput@mlsu.ac.in*

## **ABSTRACT**

*This learning is agreed out for analyzing the inside of university websites ranking NIRF (National Institutes Ranking Framework) 2021 in India. A checklist was calculated and analysis of webmetric which examines the domain, domain age, parameter analysis of web impact factors and Alexa traffic rank of websites etc was done. Further, it was observed that all the university websites have used various small tools in their website- like SEO tools. Findings revealed that the “Amrita Vishwa Vidyapeetham” university website has the oldest domain registered on August 14, 1998, and “Indian Institute of Science university” website has the highest Domain Authority score 62 with first position among all Universities. It was found from the study that three universities from Karnataka achieved place in NIRF ranked top 10 universities of India.*

**KEYWORDS:** Website Analysis, Webometric Analysis, NIRF Ranking 2021, Domain and Page Authority, Web Impact Factor, Alexa Rank, Global Rank, Page Speed, Top 10 Universities, Website Checker, Webometric Tools.

## **1. INTRODUCTION**

The National Institutional Ranking Framework (NIRF) has been accepted by the MHRD (Minister of Human Resource Development). The National Institutional Ranking Framework has been publishing the top 100 Indian Higher Education Universities based on parameter analysis such as Teaching, Learning, Professional Practices, and Graduation Outcomes. The nearby study covers the top 10 University websites of India listed in NIRF Ranking 2021. This research was structuring a webometric analysis by focusing on top 10 Universities website with the help of webometrics indicators. Webometrics is a numerical analysis of any website; it is the quantitative learn of web-related phenomena. Webometrics is a quantity of the web such as page content, parts of WebPages, links structures, internal and external link, search engine, user searching and browsing behaviour. Webometric ranking is the system

of rating websites based on composite indicators of visibility and activity measures. For any nation academic websites were the vital internet communication tools. The accomplishment of any university depends on the website, web to evaluate their educational and research performance. This study focuses on the webometric judgment by examining domain age, domain authority, page authority and total, internal and external links and page speed. Alexa traffic rank analysis and web impact factor analysis of top 10 universities websites India ranked by NIRF 2021.

The term webometrics was first coined by **Almind and Ingwersen (1997)**. The term, 'webometrics' was coined from two English words i.e. "web"& "metrics". The word 'Web' means is the short of World Wide Web and 'metrics denotes the mathematical theory of measurement. **Bjorneborn and Ingwersen (2004)** defined webometrics as: -"The study of the quantitative aspects of the construction and use of information resources, structures and technologies on the web drawing on bibliometrics and infometrics approaches".

## **2. RELATED WORKS:**

A Webometrics study conducted by Chaparwal, Naveen and Rajput, P.S., "NIRF Ranking 2020: A Webometric Analysis of Websites of Top 10 Medical Institutions" (2021) found the page domain, Alexa ranking global and regional, page speed and density analysis.

A webometric study conducted by Kadam & Bhusawar (2021) analysed websites of 25 top-ranked Indian higher education institutions. They found that the websites of Anna University ranked first in Alexa traffic rank.

Patel & Vyas (2021) carried out a webometric study of Open University Websites in India with the help of WISER Index Ranking, Social media Connectivity and Alexa Ranking. This study suggests that Open Institutes websites need to attract more external links and web impact factors.

Verma & Jaiswal (2020) explored the websites of Medical Institutes of India, their parameters being linked analysis, web impact factor and WISER ranking. Their study found that the SRM Institute of Science and technology website has a faster load time on Google search with 84 out of 100.

Stephen (2019) conducted a "webometric analysis of central universities in the north-eastern region, India". In their study, the best traffic rank websites are North-eastern Hill University and Tripura University.

Ramalingam (2019) did a webometrics analysis of Deemed University Websites of India. In this research author calculated the internal, external and back link of the website. In his study, the author suggests that the websites of deemed universities need to improve their website to attraction for the user.

Maharana et al. (2012) invested web impact factor and link analysis of 16 Indian Institute of Technology (IIT) websites of India.

## **3. OBJECTIVES OF THE PRESENT STUDY**

The present study examines the webometric analysis of top 10 university websites. The specific objectives of the present study are:

- ✓ To evaluate the domain age and domain extension of university websites.
- ✓ To identify the domain authority and page authority of universities websites.
- ✓ To identify total back links and quality back links of universities website.
- ✓ To analyse the webpage speed and mobile responsive of university websites.
- ✓ To find out the global as well as Indian Alexa traffic rank of universities websites.
- ✓ To classify the link analysis and web impact factor of universities website.

#### 4. HYPOTHESIS

H<sub>0(1)</sub> There is no significant difference between website page speed on mobile and desktop.

#### 5. METHODOLOGY

The present study examines a webometric analysis of top 10 university websites of India. The study restrained 10 Indian Universities from National Institutional Ranking Framework (NIRF) website of year 2021. The study focused on all 10 Universities websites by observation and collected the in order of domain address. Collections of data for webometrics analysis a variety of tools employed to explore universities website covered in this study. In order to collect data, various small SEO tools have been used for collecting the data that is to find out domain age, page speed, domain authority, page authority and total, internal and external links of websites. In this study, Alexa traffic rank was administrated to find out the global and Alexa rank of website.

#### 6. A STUDY OF NIRF INDIA RANKINGS 2021 UNIVERSITY

The announce date of NIRF ranking 2021 was September 9, 2021, at 12 (midday). The rating had been introduced by Union training Minister Dharmendra Pradhan. NIRF released the 6th annual rating list of better instructional institutes of the country wide ranking ensuring that each instructional institutes attempts harder to get their rankings better. In addition, they ensure that there's no fulfilment within the institutes.

**Table 1:** List of top 10 universities 2021 and their NIRF ranks in 2020

Sr. No.	Name of University	States	2021		2020	
			Score	Rank	Score	Rank
1	Indian Institute of Science	Karnataka	82.67	1	84.18	1
2	Jawaharlal Nehru University	Delhi	67.99	2	70.16	2
3	Banaras Hindu University	Uttar Pradesh	64.02	3	63.15	3
4	Calcutta University	West Bengal	62.06	4	61.53	7
5	Amrita Vishwa Vidyapeetham	Tamil Nadu	61.23	5	62.27	4
6	Jamia Millia Islamia	Delhi	60.74	6	61.07	10
7	Manipal Academy of Higher Education	Karnataka	60.58	7	61.51	8
8	Jadavpur University	West Bengal	60.33	8	61.99	5
9	University of Hyderabad	Telangana	59.71	9	61.7	6
10	Aligarh Muslim University	Uttar Pradesh	58.97	10	54.3	17

##### 6.1 Parameters

Parameters of calculating NIRF ranking overall score is computer based on the weights allotted to each head. They are taken as a whole score and can take the highest value of 100. These parameters are structured into five lane

heads. Learning from our occurrence in the top 10 universities 2021 and their NIRF ranks in 2020 the Five parameter of NIRF are as follow: -

1	TLR	Teaching, Learning & Resources
2	RP	Research and Professional Practice
3	GO	Graduation Outcomes
4	OI	Outreach and Inclusivity
5	PR	Perception

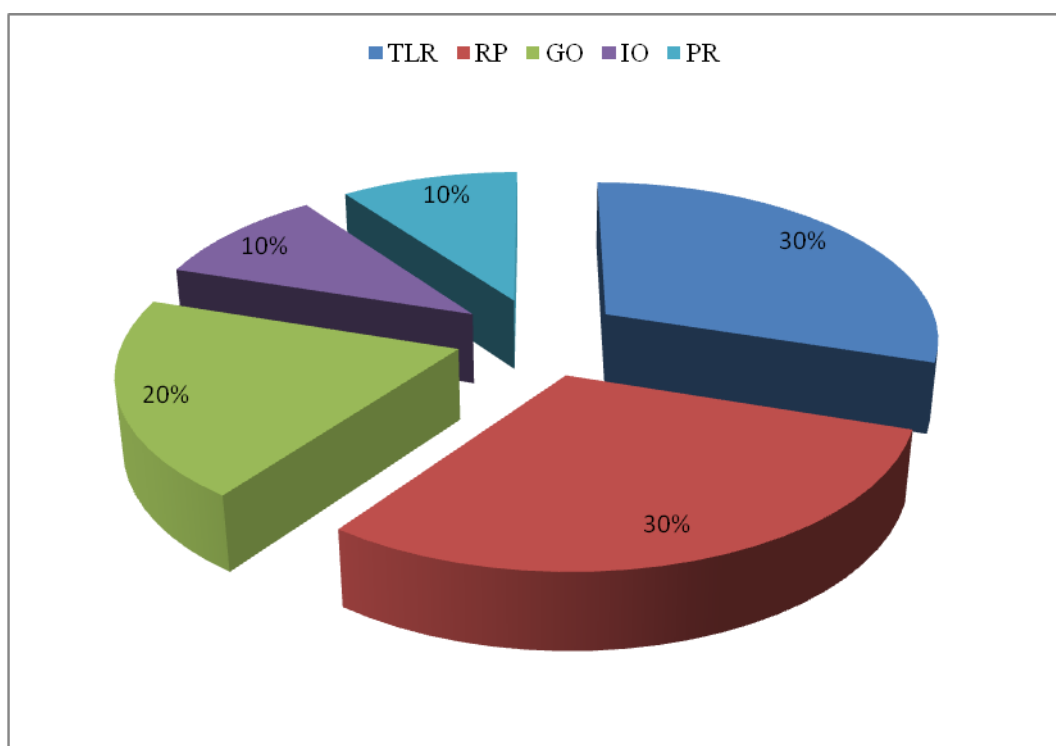
**6.2 Parameters Ranking Weight out of 100:**

In Table 2 and figure 1 weighted percentage of NIRF ranking parameters analysis - weighted of Teaching, Learning & Resources (TLR) and Research and Professional Practice is 30%, Graduation Outcome weighted is 20% and Outreach and Inclusivity and Perception weighted is 10%.

**Table 2:** Weight Edge Percentage

SR. No.	PARAMETER	Ranking weight (%)
1	TLR	30%
2	RP	30%
3	GO	20%
4	IO	10%
5	PR	10%

**Figure 1:** Weight Edge Percentage



**6.3 NIRF Ranking Parameter Analysis**

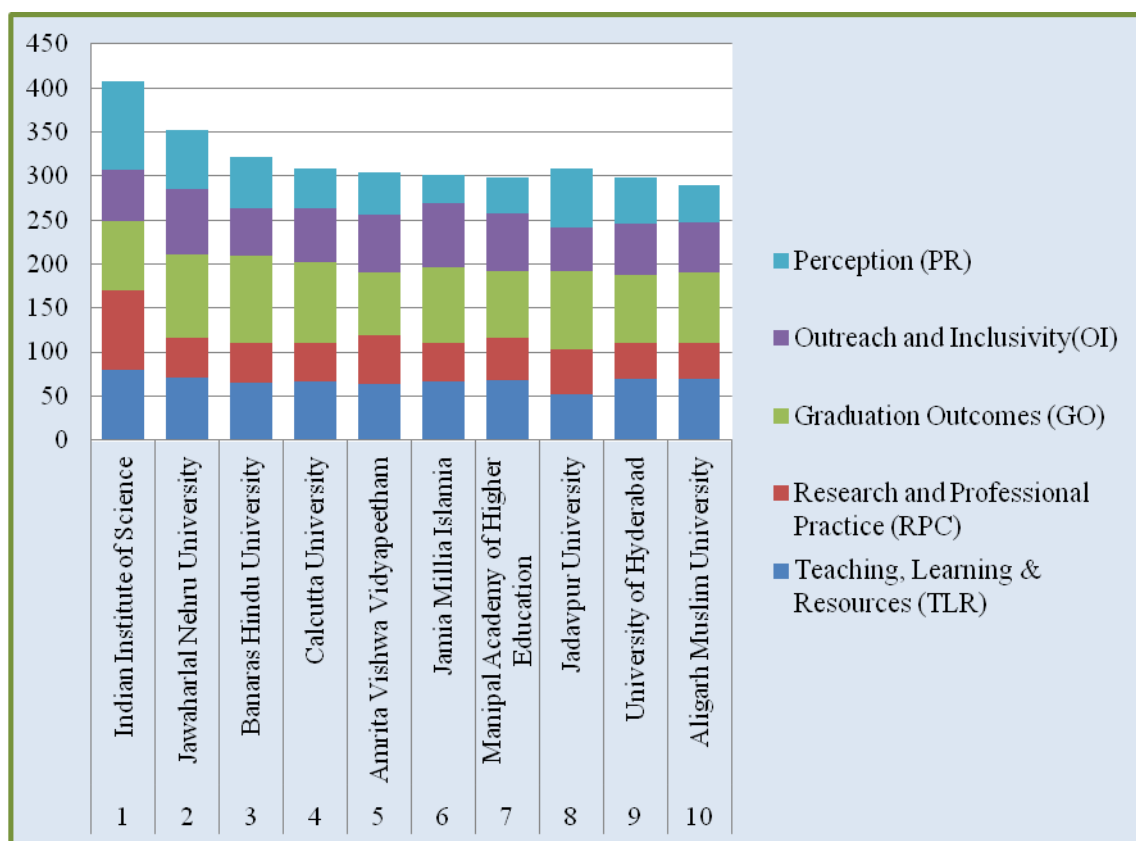
The NIRF Ranking is based on Five Parameters. These parameters are most important to calculate universities ranking and to know about universities progress. These parameters are given below in Table 3.

**Table 3: -NIRF Ranking Parameter Analysis**

<b>SR. No.</b>	<b>Top 10 University</b>	<b>Teaching, Learning &amp; Resources (TLR)</b>	<b>Research and Professional Practice (RPC)</b>	<b>Graduation Outcomes (GO)</b>	<b>Outreach and Inclusivity (OI)</b>	<b>Perception (PR)</b>
1	Indian Institute of Science	79.13	91.48	78.23	58.39	100
2	Jawaharlal Nehru University	71.19	44.96	95.07	73.36	67.9
3	Banaras Hindu University	64.5	45	100	53.13	58.6
4	Calcutta University	66.2	43.92	91.72	60.98	45.8
5	Amrita Vishwa Vidyapeetham	64.23	54.33	71.35	65.54	48.4
6	Jamia Millia Islamia	66.44	43.43	86.67	72.35	32.2
7	Manipal Academy of Higher Education	67.68	48.17	76.05	65.25	40.9
8	Jadavpur University	51.7	51.72	87.77	50.16	67.3
9	University of Hyderabad	69.59	40.74	77.44	58.72	52.5
10	Aligarh Muslim University	69.06	40.86	80.06	56.93	42.9

Table 3 and figure 2 investigate the ranking parameters of National Institutional Ranking. In framework (NIRF) of the highest percentage of Teaching Learning & Resources (TLR) in top 10 universities at, number 1 is Indian Institute of Science (79.13), number 2 is Jawaharlal Nehru University (71.19) and number 3 is University of Hyderabad (69.59) and Jadavpur University (51.7), Banaras Hindu University ((64.5) gets the lowest percentage . In this sequence Indian Institute of Science (91.48) is at the top in Research and Professional Practice (RPC) and University of Hyderabad (40.74) is at last number. In this table the Banaras Hindu University got (100) in Graduation Outcomes (GO) and is highest in the list the second is Jawaharlal Nehru University (95.07) and third is Calcutta University (91.72). In Outreach and Inclusivity (OI) number 1 is Jawaharlal Nehru University (73.36), number 2 is Jamia Millia Islamia (72.35), number 3 is Amrita Vishwa Vidyapeetham (65.54), and number 10 is Jadavpur University (50.16). In last parameter - Perception (PR), Indian Institute of Science (100) is number one and number 10 is Jamia Millia Islamia (32.17) which is lowest in this whole Table.

Figure 2: NIRF Ranking Parameter Analysis



## 7. DATA ANALYSIS AND INTERPRETATIONS

Facts analysis and interpretation is the procedure of assigning which means to the accrue facts and format the conclusions, importance, and implications of the findings. The stairs concerned in facts analysis are a feature of the type of records collected; however, returning to the cause of the evaluation and the assessment questions will provide a shape for the business enterprise of the statistics and a focus for the evaluation.

### 7.1 List of Universities and their websites addresses & domain registration date

Table 4 inform the list of NIRF ranking 2021 of top 10 University websites of India and their website address, domain registration date, their head quarter city and state name. Also mention all universities abbreviation.

Table 4: Universities, their websites address and domain registration date

Sr. No.	Name of Universities	Abbreviation	Website Address	City	Domain Registration Date
1	Indian Institute of Science	IISc	<a href="https://iisc.ac.in/">https://iisc.ac.in/</a>	Bangalore, Karnataka	05-08-2015
2	Jawaharlal Nehru University	JNU	<a href="https://www.jnu.ac.in/">https://www.jnu.ac.in/</a>	New Delhi	28-02-2004

3	Banaras Hindu University	BHU	<a href="https://www.bhu.ac.in/">https://www.bhu.ac.in/</a>	Varanasi, UP	31-07-2003
4	Calcutta University	CU	<a href="https://www.caluniv.ac.in/">https://www.caluniv.ac.in/</a>	Kolkata, West Bengal	30-11-2002
5	Amrita Vishwa Vidyapeetham	AVV	<a href="https://amrita.edu/">https://amrita.edu/</a>	Coimbatore	14-8-1998
6	Jamia Millia Islamia	JMI	<a href="https://www.jmi.ac.in/">https://www.jmi.ac.in/</a>	New Delhi	21-12-2002
7	Manipal Academy of Higher Education	MAHE	<a href="https://manipal.edu/mu.html">https://manipal.edu/mu.html</a>	Karnataka	27-9-1999
8	Jadavpur University	JU	<a href="http://www.jaduniv.edu.in/">http://www.jaduniv.edu.in/</a>	Jadavpur Kolkata	30-03-2010
9	University of Hyderabad	UOH	<a href="https://uohyd.ac.in/">https://uohyd.ac.in/</a>	Hyderabad	02-06-2011
10	Aligarh Muslim University	AMU	<a href="https://www.amu.ac.in/">https://www.amu.ac.in/</a>	Aligarh, UP	31-10-2003

Table 4: Studies the top 10 National Institutional Ranking Framework (NIRF) information ranked universities with their website URL, related City (State) and Domain Registration Date. It is noted that the All-India Universities website having the oldest domain registered on August 14, 1998. It was also experimental from table 1 that two universities from Uttar Pradesh state, two universities from Karnataka state, two from New Delhi state and two from Kolkata state achieved the place in NIRF ranked top 10 universities of India whereas, Coimbatore and Hyderabad have 1-1 universities that achieved place in NIRF ranked top 10 Universities of India. (NIRF, 2021).

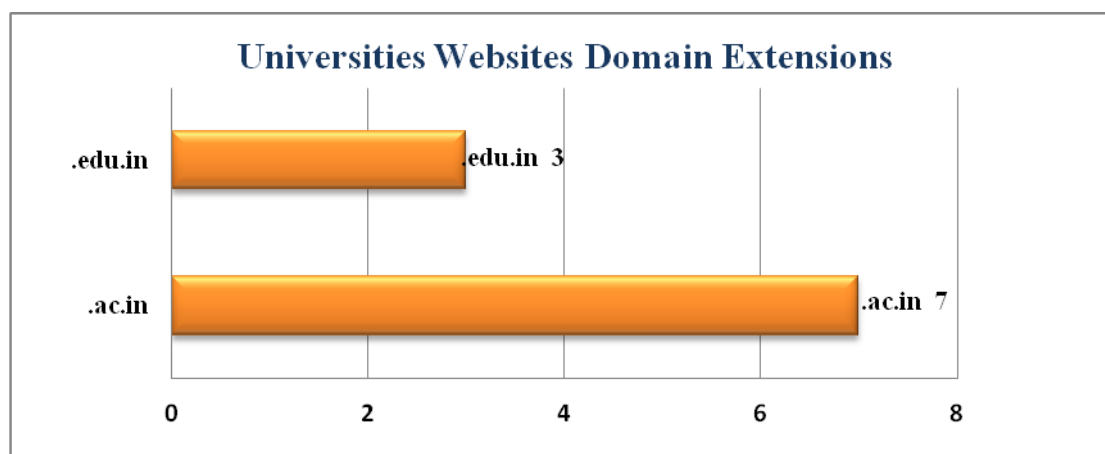
## 7.2 Universities Websites Domain Extensions

Domain call extensions are the closing part of a site name. For instance, in 'google.com,' the domain name extension is .com. Great education domain names for E-learning web sites. University, college, school, examine, ACADEMY, INSTITUTE and many others. You will additionally see area call extensions called top-degree domains (TLDs). These terms can be used interchangeably all through the post. Your area call and domain call extension come up with a running area call that your target market can type into their browsers to access your internet site.

**Table 5:** University Websites Domain Extensions

Sr. No.	Domain Extensions	No. Of Universities	Percentage %
1	. ac.in	7	70%
2	. edu.in	3	30%

**Figure 3:** University Websites Domain Extensions



Domain extension of a website plays a critical role while assessing the information from any website; the domain is the main criteria to assess the website's authority. Showing from table 5 and figure 3 that out of 10 universities websites, 7 (70%) universities websites are having domain '. ac.in', 3 (30%) universities websites have a domain extension '. edu.in'. In division, domain has been widely used in the websites of top 10 universities website.

### 7.3 Domain and Page Authority of Institutes websites

Domain and page Authority is a search engine rating score out of 100 that predicts how nicely a website will rank on search engine result pages. Area Authority is calculated through comparing many elements, such as linking root domain and overall links, right into a single domain Authority score. It's far experimental from table 6 and authority rating 62, with the first position. While figures that the Indian Institute of Science internet site accomplished the very best area Jawaharlal Nehru university internet site has the second one place with 59 rankings, Amrita Vishwa Vidyapeetham internet site is in third region with fifty-six scores, Manipal Academy of better schooling website has the fourth region with fifty-five rankings and Aligarh Muslim college internet site occupies the fifth vicinity with fifty-two scores. Jadavpur university website received only forty-four domain authority scores out of 100 points, the bottom score among all respondent institutes.

**Table 6:** Domain and Page Authority of Institutes websites

Sr. No.	Name of Universities	Domain Authority	Page Authority	Total Back links	Quality Back links	Percentage of Quality back links (%)
1	Indian Institute of Science	62	51	280k	260k	93%
2	Jawaharlal Nehru University	59	59	53k	36k	69%
3	Banaras Hindu University	51	58	130k	54k	42%
4	Calcutta University	48	56	489k	484k	99%
5	Amrita Vishwa Vidyapeetham	56	51	3k	2k	62%
6	Jamia Millia Islamia	50	55	145k	17k	12%



7	Manipal Academy of Higher Education	55	53	40k	22k	55%
8	Jadavpur University	43	53	56k	54k	97%
9	University of Hyderabad	48	49	8k	2k	21%
10	Aligarh Muslim University	52	56	104k	43k	41%

Among the top 10 university websites, the highest page authority score is 59 achieved by "Jawaharlal Nehru University" website with the first position; whereas "Banaras Hindu University" website has the second place with 58 scores, "Amrita Vishwa Vidyapeetham" website is in the third place with 56 scores, "Calcutta University" website and "Aligarh Muslim University" website whereas "Jamia Millia Islamia" website has the fourth place with 55 scores and "Manipal Academy of Higher Education" website and "Jadavpur University" website occupies the fifth place with 53 scores. "Jadavpur University" university website obtained only 43 domain authority scores out of 100 points, which is the lowest score among all respondent university websites. It is also observed from table 3 and figure 2 that "Jawaharlal Nehru University" website has got second place in domain and first place in page authority with 59 scores. Back link is a link of one website you are accomplishment from another website. Which indicates that you can access you have need of information from the one website to another website. It shows website link used in another website. Referring domains are websites from which the target website or web page has one or more back links. Calcutta University website the highest Back links of 489K and Quality Back links 484K of "Calcutta University" website with first position in both Back links and 99% of Percentage of Quality Back links.

#### 7.4 Page Speed of Universities websites

Web page speed suggests the performance of a web page on both mobile and desktop. A score of 90 or above is taken into consideration rapid, and 50 to 90 are taken into consideration moderate. Below 50 is taken into consideration to be sluggish. Table 7 and figure 4 determines four suggest the page velocity of the website.

**Table 7:** Page Speed of Universities websites

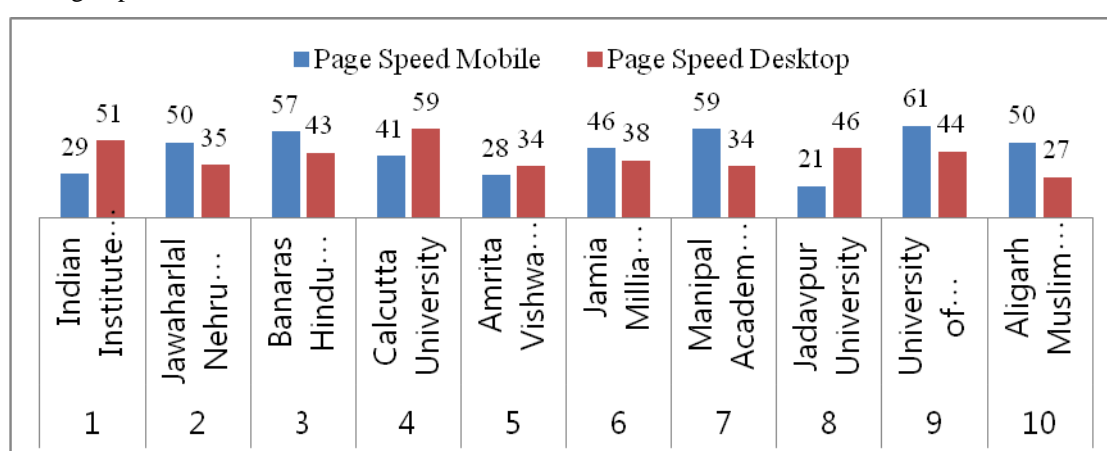
SR. No.	Top 10 University	Page Speed		Mobile Responsive
		Mobile	Desktop	
1	Indian Institute of Science	29	51	Yes
2	Jawaharlal Nehru University	50	35	Yes
3	Banaras Hindu University	57	24	Yes
4	Calcutta University	41	59	Yes
5	Amrita Vishwa Vidyapeetham	28	34	Yes
6	Jamia Millia Islamia	46	38	Yes
7	Manipal Academy of Higher Education	13	34	Yes
8	Jadavpur University	21	46	Yes
9	University of Hyderabad	61	44	Yes

10	Aligarh Muslim University	52	17	Yes
t – statics		0.023		
P value		0.491076		

**t-Test** is a small sample test and it was developed by **William Gosset in 1908**. It is also called **Welch t-test**

Analysing *t*-statics (0.023) and the *p*-value (.491076). It is the result is significant at  $p < .05$ . The calculated *t*-value is 0.023 the table value at an alpha level of .05(5%) and the *p*-value is greater than  $\alpha$ , i.e., 0.05 at 5% level of significance, it is the statistical verification to concede the null hypothesis. It concludes that there is no significant difference in the speed of the website whether it is used on mobile or desktop.

**Figure 4:** Page Speed of Universities websites



The page speed of cell “university of Hyderabad “is in the first function with 61. while “Banaras Hindu college” has 2nd location with fifty-seven, “Aligarh Muslim college ” is in 1/3 vicinity with 52, “Jawaharlal Nehru college ” has the fourth place with 50 and Jamia Millia Islamia occupies the fifth place with 46. The web page speed of computing device “Calcutta College “is within the first role with 59. while, “Indian Institute of science” has the second one location with 51, “Jadavpur College” is in third region with forty-six, “University of Hyderabad” has fourth vicinity with forty-four and “Jamia Millia Islamia ” occupies the fifth location with 38. It also found that all 10 university web sites are cell pleasant.

### 7.5 Universities Website and their Alexa ranks (Global and India ranks)

This study aims to examine the website analysis of top 10 Indian universities ranked in NIRF 2021 (National Institutes Ranking Framework).

**Table 8:** Universities Website and their Alexa ranks (Global and India ranks)

Sr. No.	Name of Universities	Alexa Rank (Global)	Global Rank	Alexa Rank (India)	India Rank
1	Indian Institute of Science	40537	2	4717	2
2	Jawaharlal Nehru University	40594	3	5425	3
3	Banaras Hindu University	56934	5	8373	7
4	Calcutta University	105445	9	14005	8
5	Amrita Vishwa Vidyapeetham	31926	1	3983	1
6	Jamia Millia Islamia	68499	7	7597	6
7	Manipal Academy of Higher Education	54162	4	7282	5
8	Jadavpur University	116579	10	28516	10
9	University of Hyderabad	76761	8	14367	9
10	Aligarh Muslim University	62345	6	7031	4

Table 8 Shows Alexa site visitors ranking for the top 10 NIRF ranking pinnacle 10 university web sites of the 12 months 2021 at global and Indian tiers. Hence, the university' websites are ranked primarily based on Alexa international and Indian site visitor's rank. After evaluation, researchers finish that college "Amrita Vishwa Vidyapeetham ", "Indian Institute of techno-logical know-how " and " Jawaharlal Nehru university " websites achieved 1 to3 positions and " Jadavpur College " website completed 10 positions respectively in each worldwide and India ranks. Whereas institute" Manipal Academy of higher schooling" website carried out 4 function global rank & five positions in India rank; "Banaras Hindu university" internet site completed 5 function worldwide rank & 7 positions in India rank and" Aligarh Muslim college" website completed 6 function world wide rank & 4 positions in India rank. "Jamia Millia Islamia" website completed7 position global rank & 6 positions in India Rank. "College of Hyderabad" internet site completed eight function international rank and 9 position in India, "Calcutta university" internet site done nine function international rank & 8 function in India Rank.

## 7.6 Web Impact Factor and Link Analysis of Institutes Websites

Table 9 shows the web impact factor and link analysis of top 10 university of India. It was noticed that "Calcutta University" is having the highest web pages of 489000 among the all-selected institute's websites. From the table, it noted that "Amrita Vishwa Vidyapeetham" is at the first position with 0.133666of **Simple Web Impact Factor (SWIF)** Whereas "University of Hyderabad" has the second place with 0.021, " Manipal Academy of Higher Education" is at the third place with 0.00842, " Banaras Hindu University " has the fourth place with 0.00553 and "Jadavpur University " occupies the fifth place with0.0043.

**Table 9:** Web Impact Factor and Link Analysis

Sr. No.	Name of Universities	Web page	Total Links	Internal Links	External Links	SWIF	IWIF	EWIF
1	Indian Institute of Science	280000	309	261	48	0.001103	0.000932	0.000171
2	Jawaharlal Nehru University	53000	29	27	2	0.000547	0.000509	0.000037
3	Banaras Hindu University	130000	720	692	28	0.005538	0.005323	0.000215
4	Calcutta University	489000	121	101	20	0.000247	0.000206	0.000040
5	Amrita Vishwa Vidyapeetham	3000	401	389	12	0.133666	0.129666	0.004
6	Jamia Millia Islamia	145000	211	182	29	0.001455	0.001255	0.0002
7	Manipal Academy of Higher Education	40000	337	218	19	0.00842	0.0054	0.000475
8	Jadavpur University	56000	245	209	36	0.0043	0.003732	0.000642
9	University of Hyderabad	8000	168	104	64	0.021	0.013	0.008
10	Aligarh Muslim University	104000	224	195	29	0.0021538	0.001875	0.000278

The **Internal Web Impact Factor (IWIF)** “Amrita Vishwa Vidyapeetham“ is in the first position with 0.129666. Whereas “University of Hyderabad” has the second place with 0.013, Manipal Academy of Higher Education is in third place with 0.0054, “Banaras Hindu University” has the fourth place with 0.005323 and Jadavpur University occupies the fifth place with 0.003732.

The **External web impact factor (EWIF)** University of Hyderabad is in the first position with 0.008. Whereas “Amrita Vishwa Vidyapeetham” has second place with 0.004, “Jadavpur University” is at third place with 0.000642, “Manipal Academy of Higher Education” has the fourth place with 0.000475, and “Indian Institute of Science” occupies fifth place with 0.000171.

## FINDING

The study provides a webometric and ranking parameters analysis of the top 10 NIRF ranked Indian university websites. The following main useful result has been revealed from the analysis:

- It is well-known that the "Amrita Vishwa Vidyapeetham" university website is having the oldest domain registered on August 14, 1998, and the “Indian Institute of Science” university website had a very recent domain registered in the year 2015.
- Majority of Universities 10 (70%) are having .ac.in domain extension for their websites. In India .ac.in domain is specially using for academic purpose.
- It was experimental that two universities from New Delhi, Uttar Pradesh and Karnataka achieved the place in NIRF ranked top 10 universities of India.

- It is experiential that the “Indian Institute of Science“ university website achieved the highest Domain Authority score, 62, with the first position. Whereas the “Jadavpur University" website obtained only 43 domain authority scores out of a total of 100 points, which is the lowest score among respondent university.
- Among the top 10 university websites, the highest page authority scores 59 is achieved by " Jawaharlal Nehru University" website with the first position; whereas " University of Hyderabad" website domain authority score obtained is only 49 out of 100 points which is very lowest score among respondent university websites.
- The Total Back links and Quality Back links of 10 university websites, the highest Total Back links Scores 489k and Quality Back links scores 484k achieved by “Calcutta University” website with the first position whereas Amrita Vishwa Vidyapeetham website Total Back links scores 3k and Quality Back links scores 2k which is very lowest score of university websites.
- In this study " University of Hyderabad" website has the highest website speed in mobile with scores 61 while in desktop “Indian Institute of Science” website scores 51 and " Manipal Academy of Higher Education" website lowest in mobile speed with scores 13 and "Aligarh Muslim University" website is having the lowest desktop speed scores 17 among all the universities.
- Alexa traffic of website with global and Indian ranks that are considered and conclude that university " Amrita Vishwa Vidyapeetham" website, " Indian Institute of Science" website and "Jawaharlal Nehru University" website achieved 1 to 3 position and " Jadavpur University "website achieved the 10 positions respectively in both global and India ranks.
- It is noted that "Amrita Vishwa Vidyapeetham“ website is at the first position in both Simple Web Impact Factor (SWIF) and internal Web Impact Factor (IWIF).
- The External Web Impact Factor (EWIF) “University of Hyderabad“ website is at the first position with 0.008.

## **CONCLUSION**

This revision discusses the webometrics analysis of websites NIRF, 2021, ranking top 10 University of India. Based on this study product, it is suggested that for the better and efficient browsing of websites they should be mobile responsive because now a day most of the information seekers operate mobile for browsing the websites to access information. Hence, it is suggested to administrators of University that the website of top-ranked University should be mobile responsive.

## **Acknowledgement**

Presentation inspiration and motivation have always played a key role in the success of any venture. We pay deep gratitude to Dr. Kavita Singh to encourage and provide the opportunity to prepare this paper.

## **REFERENCES**

- [1] Chaparwal, N., & Rajput, P. S. (2021). NIRF ranking 2020: A webometric analysis of websites of top 10 medical institutions. *Library Philosophy and Practice (e-Journal)*. <https://digitalcommons.unl.edu/libphilprac/6425>
- [2] Kothainayaki, S., Sivakumaren, K., & Gopalakrishnan, S. (2012). User preferences on university websites: A study. *Library Philosophy and Practice (e-Journal)*. <https://digitalcommons.unl.edu/libphilprac/788>

- [3] Maharana, R., Panda, K. C., & Sahoo, J. (2012). Web impact factor (Wif) and link analysis of Indian institute of technologies (Iits): A webometric study. *Library Philosophy and Practice (e-Journal)*.  
<https://digitalcommons.unl.edu/libphilprac/789>
- [4] Mobile-friendly test—Google search console. (2021). Retrieved July 15, 2021, from  
<https://search.google.com/test/mobile-friendly>
- [5] Moe, national institute ranking framework (NIRF). (2020). Retrieved July 01, 2021, from  
<https://www.nirfindia.org/2020/MedicalRanking.html>
- [6] Niper Hyderabad in national institutional ranking framework (NIRF) India rankings. (2021). Retrieved July 12, 2021, from <http://www.niperhyd.edu.in/nirf2018.html>
- [7] Pal, A., Sarkar, A., & Bhattacharya, U. (2019). Webometric analysis of open universities in India. *Library Philosophy and Practice (e-Journal)*. <https://digitalcommons.unl.edu/libphilprac/3038>
- [8] Patel, A., & Vyas, P. (2021). Webpage analysis of open university websites in India: A webometric study. *Library Philosophy and Practice (e-Journal)*. <https://digitalcommons.unl.edu/libphilprac/5801>
- [9] *Website page counter – check how many pages does a website have*. (n.d.). Sitechecker. Retrieved may 11, 2022, from <https://sitechecker.pro/page-counter/>
- [10] *Website checker—Analyse sites with this free tool online*. (n.d.). Website Checker - Analyse Sites with This Free Tool Online. Retrieved may 1, 2022, from <https://smallseotools.com/website-checker/>
- [11] Maharana, R., Panda, K. C., & Sahoo, J. (2012). Web impact factor (WIF) and link analysis of Indian institute of technologies (IITs): A webometric study. *Library Philosophy and Practice (e-Journal)*.  
<https://digitalcommons.unl.edu/libphilprac/789>
- [12]<http://drtc.isibang.ac.in/ldl/bitstream/handle/1849/436/Annals-572.pdf;jsessionid=1AEFC293ED54EA815FF51060614C267B?sequence=1>
- [13] Patel, M. (2018). Bibliometric study of Departments in Bioscience and Biotechnology in Babasaheb Bhimrao Ambedkar University, Lucknow. *International Journal of Scientific & Innovative Research Studies*, 6(2), 37–47.
- [14] Patel, S., & Bhatt, A. (2019). The application of web 2. 0 tools in university libraries of India. *Library Philosophy and Practice (e-Journal)*. <https://digitalcommons.unl.edu/libphilprac/2984>
- [15] Patel, S., Trivedi, D., Bhatt, A., & Shanti, C. (2021). Web visibility and research productivity of NIRF ranked universities in India: A Webometric study. *Library Philosophy and Practice (e-Journal)*.  
<https://digitalcommons.unl.edu/libphilprac/5326>
- [16] Ramalingam, J. (2019). Webometric analysis of deemed university websites in India. *Library Philosophy and Practice (e-Journal)*. <https://digitalcommons.unl.edu/libphilprac/2266>
- [17] Ramesh Babu, B, Jeyshankar, R. and Nageswara Rao, P. (2010). Websites of Central Universities in India: A Webometric Analysis. *DESIDOC Journal of Library & Information Technology*. 30 (4): 33-43.
- [18] Ghosh, S., & Roy, D. B. (2021). Webometric analysis of open access digital repositories of agricultural sciences in continents of Oceania. *Library Philosophy and Practice (e-Journal)*.  
<https://digitalcommons.unl.edu/libphilprac/4963>
- [19] Google. (2021). Page Speed Insights. Retrieved 15, July, 2019, from  
<https://developers.google.com/speed/pagespeed/insights/>
- [20] Jeyshankar, R., & Babu, B. R. (2009). Websites of universities in Tamil Nadu: A webometric study. *Annals of Library and Information Studies*, 56, 69–79.

- [21] Kadam, S., & Bhusawar, S. (2021). Websites of top-ranked Indian higher education institutions: A webometric analysis. *Library Philosophy and Practice (e-Journal)*. <https://digitalcommons.unl.edu/libphilprac/4732>
- [22] Khamala, D., Makori, E., & Njiraine, D. (2018). Webometrics ranking and its relationship to quality education and research in academic institutions in Kenya. *Library Philosophy and Practice (e-Journal)*. <https://digitalcommons.unl.edu/libphilprac/2020>
- [23] *Web impact factor (Wif) and link analysis of indian institute of technologies (Iits): A webometric study—Proquest.* (n.d.). Retrieved May 31, 2022, from <https://www.proquest.com/openview/2e2f39bfcaa21e339b77b4c4325952ef/1?pq-origsite=gscholar&cbl=54903>
- [24] Easley, J., Dixon, P. M., & Toit, N. du (Eds.). (2022). *Equine dentistry and maxillofacial surgery*. Cambridge Scholars Publishing.
- [25] *Website link checker | url validator: Site24x7 tools.* (n.d.). Retrieved May 31, 2022, from <https://www.site24x7.com/link-checker.html>
- [26] *End of service notice.* (n.d.). Retrieved May 16, 2022, from <https://www.alexa.com/>
- [27] *Check page rank—Check your page rank free!* (n.d.). Retrieved May 25, 2022, from <https://checkpagerank.net/check-page-rank.php>
- [28] *Domain Authority Checker—Moz DA PA Checker of multiple urls.* (n.d.). Domain Authority Checker - Moz DA PA Checker of Multiple Urls. Retrieved May 25, 2022, from <https://smallseotools.com/domain-authority-checker/>
- [29] *Website seo checker, full seo analysis on-page off-page.* (n.d.). Retrieved June 1, 2022, from <https://websiteseochecker.com/>
-