Navigating NIRF: Transformative Reforms in India's Higher Education Landscape

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Abstract: In this paper, a thorough systematic and sequential study of NIRF India Rankings process and various ranking parameters considered in the NIRF Rankings framework, 2024 has been carried out. The ranking parameters and score of leading Indian universities were collected from secondary data sources. Similarly, the global ranking parameters and scores of these Indian universities in the same were explored. Some flaws in the rankings have also been presented based on the published documents and educational news. Some additional measures have also been suggested to consider them in the forthcoming years so that the existing ranking framework will become more robust and stable and finally the paper is summarized. This study would be further helpful in fostering new ideas toward improving NIRF process with the aim making it contemporary globally viable and acceptable academic quality standard.

Keywords: Ranking, NIRF, Higher Education Institution, India

1. INTRODUCTION

The Higher Education System (HES) in India is the world's third largest in terms of students, which is just next to China and United States. As per All India Survey on Higher Education (AISHE) 2021-2022, released by Ministry of Education on 24 January 2024, the total number of Universities / University level institutions registered is 1,168, Colleges 45,473 and Standalone Institutions 12,002. The total enrolment in higher education has increased to nearly 4.33 crore in 2021-22 from 4.14 crore in 2020-21.[1]Quality teaching, learning and research are the primary issues in the HES. The Ranking process is considered as an assessment tool for quality assessment of Higher Education Institutions (HEIs) and will provide significant impact on the performance outcomes in terms of quality education and research. The quality of education and research will ultimately contribute to the sustainable development of the nation.

Thus, this research paper focuses on NIRF India Rankings process and various ranking parameters considered in the NIRF Rankings framework, 2024. The ranking parameters and score of leading Indian universities were collected from secondary data sources. Similarly, the global ranking parameters and scores of these Indian universities in the same were explored. Some flaws in the rankings have also been presented based on the published documents and educational news. Some additional measures have also been suggested to consider them in the forthcoming years so that the existing ranking framework will become more robust and stable and finally the paper is summarized. This study would be further helpful in fostering new ideas toward improving NIRF process with the aim making it contemporary globally viable and acceptable academic quality standard.

2. IMPORTANCE OF RANKING

It is important for us to understand why institution rankings are needed. The students use them to get help in selecting where to study, faculty use them to select where to work, universities use them to market themselves, funders use them to select to whom to fund, and governments use them to set their own ambitions. In this era when education has become a market commodity, university rankings have become the most important factor to form an opinion of students and their parents. A survey conducted by 'THE Student Pulse', a research resource of the Times Higher Education consultancy team, found that a university's ranking was the second most-researched factor by prospective international students when choosing where to study, with 34 percent of respondents saying it was important to them, after tuition cost and ahead of courses offered.[2] Alok Jain, former VP at IIM Ahmedabad, criticizes the lack of standardization among different ranking agencies and the reliance on 'tricks' by private universities. He stated, "Many Universities are buying research and patents! Publication business has become a paid channel. But who will monitor or question?"[3]

3.NIRF RANKINGS 2024

Shri Dharmendra Pradhan, Honorable Minister for Education and Skill Development and Entrepreneurship released National Institutional Ranking Framework (NIRF) India Rankings 2024 on 12thAugust 2024.[4]This marks the ninth consecutive edition of the India Rankings for higher education institutions in five existing categories, namely: Overall, Colleges, Universities, Research Institutions and Innovation, eight existing subject domains, namely Engineering, Management, Pharmacy, Law, Medical, Architecture & Planning, Dental, Agriculture & Allied Sectors, and three categories namely Open Universities, State Public Universities and Skill Universities that were added in 2024 to the portfolio of India Rankings. The National Board of Accreditation (NBA) is the primary agency that was given the overall responsibility of coordinating and executing the Ranking work in consultation with the Implementation Core Committee, constituted by the Ministry of Education.

The process of framing NIRF began on October 9, 2014 with constitution of a 16-member core committee under the chairmanship of Secretary (HE), Ministry of Human Resource Development. The terms of reference of the Committee were to suggest a reliable, transparent and authentic National Framework for performance measurement and ranking of institutions for higher education and to recommend institutional mechanisms, processes and timelines for implementation of the National Institutional Ranking Framework. In its first year, number of categories and subject domains were four namely, University, Engineering, Management and Pharmacy in 2016. A common Overall ranking was introduced in 2017 for institutions with at least 1,000 students, supplementing the category-specific and domain-specific rankings to provide a unified comparison across institutions.

A total number of 6,517 unique institutions responded in 2024 and offered themselves for ranking under "Overall", category-specific or domain-specific rankings. In all, 10,845 applications for ranking were made by these 6,517 unique applicant institutions under various categories and / or subject domains. Total number of HEIs that participated in the ranking exercise in various categories and subject domains has increased from 3565 in 2016 to 6,517 in 2024, number of categories and subject domains has increased from 4 in 2016 to 16 in 2024.

As a matter of practice, 100 institutions are ranked in Overall and Universities since inception of these two categories. In addition, 100 institutions each are ranked in Overall and Universities categories in two rank bands of 50 each. 200 additional institutions each are ranked in Engineering and Colleges in three rank bands consisting of two rank bands of 50 each, i.e. 100-150 and 151-200 and one rank band of 100 each i.e. 201-300. Number of institutions ranked in Management and Pharmacy has also been increased from 75 to100 each from 2022 onwards. However, number of institutions ranked are restricted between 40 to 50 in subject domains namely Architecture & Planning, Law, Medical, Dental, Research Institutions and Agriculture and Allied Sectors. As far as newly introduced categories are concerned, 50 State Public Universities are ranked this year with additional 50 in rank band of 51-100.

The ranking framework evaluates institutions on 18 parameters organized under five broad generic groups of parameters, i.e. Teaching, Learning and Resources (TLR), Research and Professional Practice (RP), Graduation Outcome (GO), Outreach and Inclusivity (OI) and Perception (PR). Ranks are assigned based on total sum of marks secured by HEIs for each of these five broad groups of parameters. A 5-dimensional view of institutions across the 5 broad generic groups of parameters provides relative strengths of the institution.

Many of these parameters align with global standards, focusing on teaching, learning, and research environments, while some are specific to India, reflecting the aspirations of its growing higher education population. India-specific parameters include regional diversity, outreach, gender equity, and inclusion of disadvantaged groups of society. As per Ministry of Education, by and large, India Rankings continues to give a lot of emphasis to collection, verification and use of reliable data, unlike global rankings that gives dis-proportionate weightage to perception and internationalization (in terms of international students and international faculty). NIRF relies on ranking based on data, which is more objective, especially in a large higher education system like India, where perception data alone can be misleading and amenable to manipulation.

The new parameters and changes introduced for India Rankings 2024 are as follows:

- Removal of self-citations under "Research and Professional Practices" for all categories and subject domains;
- Introduction of parameters on sustainability;
- Introduction of parameters on new initiatives;
- Implementation of multiple entry and exit;
- Introduction of courses on Indian Knowledge System; and
- Imparting of courses in multiple Indian regional languages (MIR).

3.1 Details of Broad Generic Group of Parameters

1. Teaching, Learning & Resources (TLR)

- Student Strength including Ph.D. / Doctoral students (SS): function of sanctioned to enrolled students and total number of students enrolled for the doctoral program.
- Faculty-Student Ratio with emphasis on permanent faculty (FSR): Expected ratio is 1:15 to score maximum marks.
- Combined Metric for Faculty with PhD (or equivalent) and Experience (FQE): Faculty with PhD (or equivalent) – over 95% for full marks and Experience (F1=Fraction with Experience up to 8 years; F2= Fraction with Experience between 8+ to 15years; F3=Fraction with Experience > 15 years). Rationale: Full marks for a ratio of 1:1:1
- Financial Resources and their Utilization (FRU): Average Annual Capital and Operational Expenditure per student for the previous three years.
- Online Education: Online Completion of Syllabus & Exams (OE).
- Multiple Entry / Exit, Indian Knowledge System and Regional Languages (MIR).

2. Research and Professional Practice (RP)

- Combined metric for Publications (PU): weighted number of publications to faculty ratio.
- Combined metric for Quality of Publications (QP): based on Total Citation Count over previous three years and number of citations in top 25 percentile averaged.
- IPR and Patents (IPR): Patents Published & Granted over last three years, higher weightage for granted as compared to published patents.
- Footprint of Projects, Professional Practice and Executive Development Programs (FPPP): average annual research funding earnings, average annual consultancy amount and Average annual earnings from Full Time Executive Development Programs.
- Publications and Citations in SDGs: related to sustainability

3. Graduation Outcomes (GO)

- Metric for University Examinations (GUE): percentage of Students (averaged over the previous three years) passing the respective university examinations in stipulated time for the program. Full marks for 80% students passing all examinations.
- Metric for Number of Ph.D Students Graduated (GPHD): average over previous three years.
- Combined metric for Placement and Higher Studies (GPH): Percentage of graduating students (in UG/ PG programs) placed and Percentage of graduating students (in UG/ PG programs) who have been selected for higher studies.
- Median Salary: Median salary of graduates (in UG/PG program) in the previous three years.
- Metric for Number of PG Students Graduated (GPG): for Medical Institutions only.
- Metric for Number of Super Specialty Student Graduated (GSS): for Medical Institutions only.

4. Outreach and Inclusivity (OI)

- Percentage of Students from Other States/ Countries (Region Diversity RD): 25 marks for other states and 5 for international students.
- Percentage of Women (Women Diversity WD): Expectation: 50% women students and 20% women faculty – equal weightage for both.
- Economically and Socially Challenged Students (ESCS) : percentage of students provided full tuition fee reimbursement by the institution.
- Facilities for Physically Challenged Students (PCS).

5. Perception

- Employers & Academic Peer (PR): through a survey conducted over a large category of Employers, Professionals from Reputed Organizations and a large category of academics

to ascertain their preference for graduates of different institutions.

3.2 Allotment of Marks and Weightages to various Parameters

The allotment of marks and weightages to various parameters for different types of institutions and subject-domains are not common. The same has been reflected in Table 1 mentioned below:

Allotment of Marks and Weightages to various Parameters									
	Parameter	Overall & Univs	Engg, Pharma , Agri	Archi	Mgmt	Med	Dental	Law	Colleges
1	Teaching, Learning & Resources (TLR) - 100	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.4
A	Student Strength including Doctoral Students (SS)	20	20	20	20	20	15	20	20
B	Faculty-student ratio with emphasis on permanent faculty (FSR)	25	30	30	30	30	30	30	30
C	Combined metric for Faculty with PhD (or equivalent) and Experience (FQE)	20	20	20	20	20	20	20	20
D	Financial Resources and their Utilisation (FRU)	20	30	30	30	30	35	30	30
E	Online Education (OE)	10	0	0	0	0	0	0	0
F	Multiple Entry/Exit, IKS & Regional Languages (MIR)	5	0	0	0	0	0	0	0
2	Research and Professional Practice (RP) - 100	0.3	0.3	0.2	0.3	0.3	0.3	0.15	0.15
A	Combined metric for Publications (PU)	30	35	60	40	40	40	50	70
B	Combined metric for Quality of Publications (QP)	30	40	20	40	40	40	30	30
C	IPR and Patents: Published and Granted (IPR)	15	15	0	0	10	0	0	0
D	Footprint of Projects and Professional Practice, EDP /MDP(FPPP)	15	10	20	20	10	20	20	0
E	Publications and Citations in SDGs	10	0	0	0	0	0	0	0
3	Graduation Outcomes (GO) - 100	0.2	0.2	0.2	0.2	0.2	0.2	0.25	0.25
A	Metric for University Examinations (GUE)	60	15	30	20	25	30	15	40
B	Metric for Number of Ph.D. Students Graduated (GPHD)	40	20	0	0	0	0	20	0
C	Combined metric for Placement and Higher Studies (GPH)	0	40	40	40	25	35	40	40
D	Median Salary (GMS)	0	25	30	40	0	0	25	20
E	Metric for Number of PG Students Graduated (GPG)					30	35		
F	Metric for Number of Super Specialty Student Graduated (GSS)					20	0		
4	Outreach and Inclusivity (OI) - 100	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
A	Percentage of Students from Other States/Countries (Region Diversity RD)	30	30	30	30	30	30	30	30
B	Percentage of Women (Women Diversity WD)	30	30	30	30	30	30	30	30
C	Economically and Socially Challenged Students (ESCS)	20	20	20	20	20	20	20	20

D	Facilities for Physically Challenged Students (PCS):	20	20	20	20	20	20	20	20
5	Perception - 100	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Peer Perception: Academic Peers and Employers (PR)	100	100	100	100	100	100	100	100

Table 1 - Allotment of Marks and Weightages to various Parameters

3.3 Anomalies in Allotment of Marks and Weightages

- Online Education (OE) and Multiple Entry/Exit, IKS & Regional Languages (MIR) – It is not understood as to why these parameters have been applied for 'Overall and Universities' only. In view of emphasis on these issues in NEP 2020, these should have been applicable to all other institutions as well.
- Publications and Citations concerning Sustainability - Same issue exists for this parameter also. It is not applicable to any institution other than 'Overall and Universities'.
- Arbitrariness in allotment of marks – For 'Dental Institutions', the marks allotted to 'Student Strength' has been reduced by 5 marks and these marks have been added to 'Financial Resources', making it highest within TLR. It does not make any sense.
- IPR and Patents (IPR) – It should have been applicable to other type of IPR like copyright, design etc also,
- Metric for University Examinations (GUE) – Under this head, marks allotment is widely spread to 15, 20, 25, 30, 40 and 60 for different type of institutions. This issue has been discussed later on also.
- Placement and Median Salary – This parameter has not been made applicable to 'Overall and Universities', while it is applicable to 'Colleges", defies the logic. Top ranked Hindu College has scored 17.19 out of 20 marks for Median Salary. Even the 100th Rank College (Scott Christian College) has got 9 marks under this head. For the students and parents, this issue is very critical while selecting the institution. 'Medical and Dental Institutions' are being assessed for placement but not for median salary! AIIIMS, New Delhi has scored 23.44 out of 25 under head of 'Placement and Higher Studies', but median salary is not assessed.
- Law – Very low weightage of 0.15 has been allotted to Research and Professional Practice, as compared to 0.3 for Overall and Universities etc.

3.4 Participation and Performance of Institutions:

1. Region wise participation (out of 10,845 institutions):North – 15%, South -40%, East – 14% and West - 31%
2. State wise share in top 100 Overall rankings: (Based on data in Appendix) Top Five states - Tamil Nadu – 18, Maharashtra – 11, Uttar Pradesh – 8, Delhi – 7, Punjab and West Bengal – 6 each. Not performing so well states – Haryana – Nil, Gujarat and Jharkhand – 1 each, Bihar, Madhya Pradesh and Himachal Pradesh – 2 each.
3. Institution wise share in top 100 Overall rankings: (Based on data in Appendix)

- IITs: total 16 (13 out of top 50 institutions). IIT Madras ranked at 1 to 73 (Indian Institute of Technology, Patna).
- Central Institutions: 8 (6 out of top 25 institutions), JNU Delhi at 10th Rank to 75 (Indian Statistical Institute, Kolkata).
- Central Medical Institutions: 5, AIIMS New Delhi ranked at No 7 to last one at 99 (All India Institute of Medical Sciences, Patna).
- Deemed Institutions: 23, Manipal Academy of Higher Education, Manipal at 14th Rank to 98th Rank (Tata Institute of Social Sciences, Mumbai).
- Private Institutions: 9, Amrita Vishwa Vidyapeetham, Coimbatore ranked at Number 18 to last one ranked 96 (Sri Ramachandra Institute of Higher Education and Research)
- State Institutions: 25 (Maximum share in the top 100 rankings, but only 7 out of top 50 institutions). Jadavpur University ranked 17 to last one at 100 (Periyar University, Salem).
- NITs: 9, NIT Tiruchirappalli at 31st Rank (after 10 IITs) to 93rd rank (National Institute of Technology Durgapur).
- Research Institutions: 5, IISc Bangalore at Second Rank and last one at 78th rank (Indian Institute of Science Education & Research, Bhopal). There are only seven IISERs in India, out of that four have found place in Top 100.

4. Around 10% entries in Top 100 are new entries every year, as compared to the previous year, mostly in lower ranks. These are not necessarily, first time entries in Top 100.
5. Analysis : IITs have performed the best with 69% of them making in the list. Deemed and Central Institutions were next with 17% and 14% respectively joined the elite rank. State and Private Institutions have fared poorly with only 5% and 2% of them making to the Top 100 list.

3.5 Comparative Data Analysis of Various Broad Parameters

OVERALL DATA ANALYSIS 2024						
	TLR (100)	RP (100)	GO (100)	OI (100)	PERCEPTION (100)	Overall Score
Weight	0.3	0.3	0.2	0.1	0.1	
Average Top 50	70.81	52.56	78.65	64.01	36.39	61.49
Average Bottom 50	66.39	32.21	69.55	61.43	13.96	50.92
Difference	4.42	20.35	9.1	2.58	22.43	10.57
Average Top 100	68.61	42.38	74.1	62.7	25.17	56.76
Std Dev Top 100	7.53	15.7	9.35	7.38	22.87	8.46

Table 2: Overall Data Analysis 2024 (Based on data in Appendix)

- Teaching Learning Resources – There is not much difference between top and bottom 50 Institutions. IIT, Kanpur (Ranked 5th) got highest marks – 89.84 and Panjab University (60) got the lowest marks of 54.31. Standard Deviation is quite low.
- Research and Professional Practice–There is wide difference between top and bottom 50 Institutions, thus standard deviation rising to 15.7. Highest marks of 87.3 were scored by IIT, Madras (Ranked No 1) and lowest score of 15.83 was obtained by Tata Institutes of Social Sciences, Mumbai (98th Rank). Value of Spearman's Rank Order Correlation Coefficient between ranks of institutions based on its total score with that of its rank based on research performance under 'Overall' category was 0.82, which shows a very positive and strong correlation between overall rank of institutions and ranking based on its 'Research and Professional Practice'.
- Graduation Outcomes–Under this head, Institutions got the highest average of 74.1. There is marginal difference between top and bottom 50 Institutions. University of Delhi (15th rank) topped with 98.54 and lowest marks of 50.68 were obtained by AIIMS, Rishikesh (74).
- Outreach and Inclusivity - There is hardly any difference between top and bottom 50 Institutions. Thus standard deviation is just 7.38. Jamia Milia Islamia (13th rank) got the highest marks of 83.1 and Indian Statistical Institute, Kolkatta (75) got the lowest marks of 45.27.
- Perception –IIT, Madras got full marks of 100 and Datta Meghe Institute of Higher Education and Research got just 1.41 marks under this head, such was the dispersion of marks. Standard deviation shot up to 21.28. Average was lowest with just 25.17 marks. The issue has been discussed later on.

3.6 Comparison with Performance in 2023

OVERALL DATA ANALYSIS 2023						
	TLR (100)	RP (100)	GO (100)	OI (100)	PERCEPTION (100)	Score
Weight	0.3	0.3	0.2	0.1	0.1	
Average Top 50	67.48	51.88	78.77	63.33	35.93	61.49
Average Bottom 50	60.64	29.97	70.22	61.38	13.72	48.74
Difference	6.84	21.91	8.55	1.95	22.21	12.75
Average Top 100	64.06	40.92	74.49	62.35	24.82	55.11
Std Dev Top 100	8.69	16.3	9.55	7.41	21.28	8.98

Table 3: Overall Data Analysis 2023 (data taken out from NIRF 2023 Ranking)

Overall the institutions have scored higher in 2024 for all parameters including Overall Score (except Perception) as compared to 2023. This has resulted in lower standard deviation for all the parameters (excluding Perception) in 2024.

3.7 Misaligned Weightages[5]

NIRF 2024 overall rankings have used 17 parameters to evaluate 'Overall and Universities'. Figure 1 shows the importance (weight) allocated to each parameter out of a total of 100 marks, arranged in ascending order. Theoretically, these parameters represent a good spread of criteria. However, even the most important parameters are ill-designed.

While National Education Policy (2020) has focused on Holistic and multidisciplinary education, Internationalization, Autonomy and accountability, Research and innovation, Inclusivity and equity, Digitalization of teaching-learning process and promoting multilingualism, NIRF 2024 has given highest weightage to University Examinations (percentage of students passing the examination in stipulated time frame)! If eighty percent or more students clear all the exams in stipulated time frame, the university gets full marks for this parameter. Even Gujarat University, Ahmedabad (94th Rank), Sri Ramachandra Institute of Higher Education and Research, Chennai (96th Rank) and Acharya Nagarjuna University, Guntur (97th Rank) have scored full marks for University Exams. The most significant parameter of NIRF is thus also the most useless, as almost everyone scores full marks in it. This parameter should be redefined to measure something more meaningful, such as the difficulty level of university exams using the average grade point in an institute. This discrepancy shows a mismatch between our educational goals and the current ranking system.

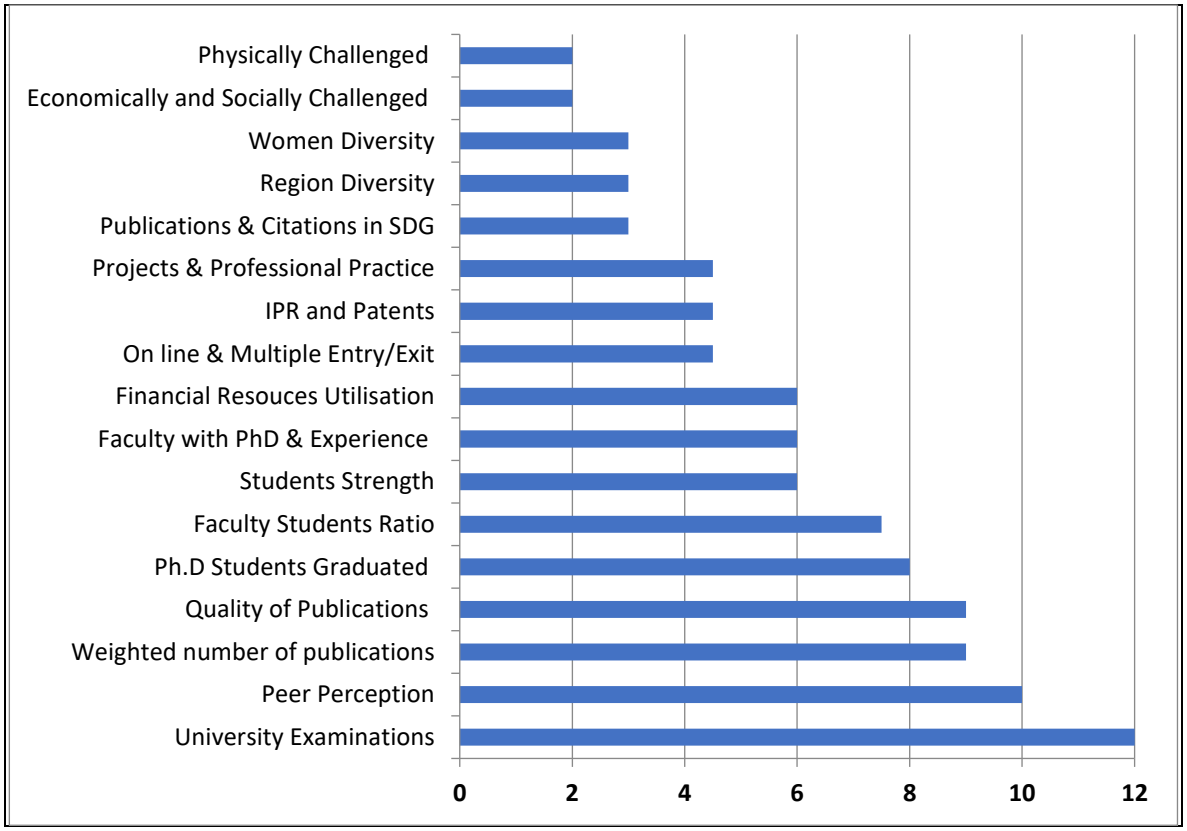

Figure 1: Distribution of Marks to various Parameters[6]

4 LIMITATIONS IN RANKING PARAMETERS

a) Addressing Research Parameter deficiency in NIRF Rankings

Research is one of the most important parameters in university rankings. The following deficiency should be addressed adequately:

1. Publications per faculty does not capture the true essence. It should be based on higher quality and impact.
2. R&D project numbers give false status, it should be based on impact and outcome.

3. Patents - granted should be given more weightage as compared to published.

b) Questioning Faculty Quality Rankings in NIRF

From students' perspective, faculty quality is one of the most important parameters. It is really shocking to see much lowered rank institutions scoring higher than India's top most institutions in Faculty Quality as shown in Table -4 below:

Name of the Institution	Overall Rank	Faculty - PhD & Experience (FQE) – 20 Marks
Saveetha Institute of Medical and Technical Sciences, Chennai	22	19.99
Punjab Agricultural University, Ludhiana	80	18.78
Kalinga Institute of Industrial Technology	28	18.36
Dr. D. Y. Patil Vidyapeeth, Pune	63	18.25
Homi Bhabha National Institute, Mumbai	27	18.19
India's Top Institutions		
IIT Madras	1	16.49
IISc, Bangalore	2	18.60
IIT, Bombay	3	16.87
AIIMS, New Delhi	7	17.34
JNU, New Delhi	10	16.26

Table 4: Marks Scored by Institutions under FQE

One of the primary issues with the current NIRF definition of faculty quality is that it may not adequately capture the true expertise and impact of the faculty. Factors such as faculty qualifications, teaching effectiveness, industry experience, and international collaborations are being overlooked.

c. Revaluating the Impact of University Size on NIRF Rankings

Instead of merely considering the size of student intake, it would be more effective to measure the quality of student intake based on scores in standardized entrance tests like JEE, NEET, CUET or related exams. This approach would provide a more accurate reflection of the academic capabilities of the student body and ensure that universities are maintaining high standards in their admissions process. By focusing on the quality rather than the quantity of students, we can encourage universities to prioritize excellence in education and better prepare their students for future success.

d. Questioning the Transparency of 'Perception' in NIRF Ranking

This is one of the most opaque parameters in NIRF. It is assessed through a 'survey', the details of which are not disclosed. In Table 5, we see the rankings according to 'Perception' for some institutions. It is surprising to see that National Institute of Technology, Tiruchirappalli has higher perception marks than IIT, Roorkee and Birla Institute of Technology & Science, Pilani. Even Graphic Era University, Dehradun has got higher rank than BITS Pilani, world renowned institution. Christ University, Bangalore and Dr. D. Y. Patil Vidyapeeth have higher marks than well known Aligarh Muslim University and Jamia Millia Islamia, New Delhi.

Name of the Institution	Overall Rank	Perception – 100 Marks
National Institute of Technology, Tiruchirappalli	31	55.37
Christ University, Bangalore	90	39.72
Dr. D. Y. Patil Vidyapeeth	63	37.45
Graphic Era University, Dehradun	79	32.5
Much higher placed Institutions		

Indian Institute of Technology, Roorkee	8	52.89
Aligarh Muslim University	16	33.15
Jamia Millia Islamia, New Delhi	13	29.72
Birla Institute of Technology & Science - Pilani	23	28.11

Table 5: Marks scored by Institutions under Perception

One of the most significant oversights in the ranking system is the lack of consideration for students' quality of life. While the Perception Factor accounts for the opinion of employees, academicians and industry personnel, it neglects the critical perspective of the students themselves. This is particularly concerning for institutions where the majority the students are residential. To improve the Perception parameter in NIRF, it is crucial to enhance transparency and provide detailed information about the survey process. By adopting these practices, NIRF can ensure that the Perception parameter is both transparent and credible, helping to build trust and confidence in the ranking system.

e. Others:

1. HEIs in rural areas - not rewarded for community connect and considered for industry connect only, which does not favour them.
2. Need to include - Incubation, Copyrights, Extra Curricular and Cocurricular Activities

5.GLOBAL RANKING SYSTEMS AND PERFORMANCE OF INDIAN HEIs

The QS World University Rankings is a portfolio of comparative college and university rankings compiled by Quacquarelli Symonds, a higher education analytics firm. QS was founded by Nunzio Quacquarelli in 1990 to provide information and advice to students looking to study abroad. They had partnered with Times Higher Education (THE) magazine in 2004 to create the THE–QS World University Rankings. In 2009, the two organizations parted ways to produce independent university rankings, the QS World University Rankings and THE World University Rankings. THE created a new methodology with Thomson Reuters, and published the first Times Higher Education World University Rankings in September 2010. QS rankings are regarded as one of the most-widely read university rankings in the world, along with Academic Ranking of World Universities and THE World University Rankings. QS ranking has been criticized for its overreliance on subjective indicators and reputation surveys, which tend to fluctuate over time and form a feedback loop. Concerns also exist regarding the global consistency and integrity of the data used to generate the QS rankings.

Sustainability, employability and International research collaboration are the dimensions that were either reinforced or introduced for the first time by QS for 2025 ranking. These changes reflect the shifts in higher education that have occurred over the past two decades, such as growing importance of sustainability, employability and research collaboration.

Performance Lenses	2025 Edition Weights
Academic Reputation (academic excellence)	30%
Employer Reputation – employable graduates	15%
Faculty Student Ratio	10%
Citations per Faculty	30%
International Faculty Ratio	5%
International Students Ratio	5%
International Research Network	5%
Employment Outcomes	5%
Sustainability	5%

Table 7: Weights for QS World University Ranking[7]

5.1 Indian HEIs in QS World University Ranking 2023

There has been a remarkable improvement in India's Performance in the 21st Edition of QS World University Rankings 2025 edition, released on 7 June 2024[8]. India's higher education system was 7th most represented globally with 47 institutions. It was only 11 in 2015 Edition. The IITs are steadily positioning themselves higher in the rankings, a testimony to the strength and success of the Indian public technological research university model, reflecting their status and role as Institutes of National Importance. Among the IITs, Indian Institute of Technology Bombay is the most highly ranked IIT (#118 up from #149 last year), followed closely by

IIT, Delhi; IIT Madras; IIT Kanpur; IIT Kharagpur; IIT Roorkee; IIT Guwahati and IIT Indore, all ranked higher than in 2024 and figure among the top 500 universities in the world. In the QS World University Rankings 2025, Indian Institute of Science (IISc) gained the place of 211.The National Institute of Technology (NIT) Tiruchirappalli is also ranked in the top 800.

Central Universities are led by University of Delhi (ranked 328th) and JNU, BHU, AMU, Hyderabad and Jamia Milia Islamia are in top 1200 Universities. An improved number of State Universities is also a noteworthy scale up in the QS World University Rankings 2025[9] with Savitribai Phule Pune University, University of Madras, Jadavpur University, and Chandigarh University, amongst others.

5.2 Times Higher Education (THE) World University Ranking

Ninety one Indian Universities secured spots in the list announced on 27 September 2023, surpassing last year's count of 75**.** However, IITs have continued to boycott the ranking for fourth consecutive year. India became fourth most well-represented nation in the list this year. IISc Bangalore was the top most ranked University in 201-250 group and Anna, Jamia Islamia, Mahatma Gandhi and Shoolini Universities were ranked in 501-600 band.

The 18 performance metrics representing the five pillars are weighted according to THE's assessment of relative importance, the details are mentioned in Table 8**.**[10]

Pillar	Metric	% Weighing
Teaching (29.5%)	Teaching Reputation	15
	Faculty Staff Ratio	4.5
	Doctorate to Bachelor Ratio	2
	Doctorate to Staff Ratio	5.5
	Institutional Income	2.5
Research Environment (29%)	Research Reputation	18
	Research Income	5.5
	Research Productivity	5.5
Research Quality (30%)	Citation Impact	15
	Research Strength	5
	Research Excellence	5
	Research Influence	5
International Outlook (7.5%)	International students	2.5
	International staff	2.5
	International Collaboration	2.5
Industry (4%)	Income from Industry	2
	Patents	2

Table 8: Weightings of metrics to final scores and rankings for THE World University Ranking

5.3 Shanghai Ranking

The Academic Ranking of World Universities (ARWU), also known as the Shanghai Ranking, was first published by the Centre for World-Class Universities (CWCU) of Shanghai Jiao Tong University, China making it the first global university ranking with multifarious indicators and updated on annual basis. ARWU uses six objective indicators to rank world universities, including the number of alumni and staff winning Nobel Prizes, number of highly cited researchers, Papers indexed in Science Citation Index-Expanded™ and Social Science Citation Index™ (Web of Science) and per capita academic performance of a university. More than 2500 universities are actually ranked by ARWU every year and the best 1000 are published. Fifteen Indian Universities found their place in 2024 Rankings[11]. IISc Bangalore was ranked highest amongst them in the bracket of 401-500. IIT Delhi and University of Delhi were ranked 601-700, IIT Roorkee was in the bracket of 701-800; IIT Madras, IIT Kharagpur and AMU were ranked 801-900 with BHU and IIT Kanpur ranked 901-1000. Private / Deemed Universities VIT, Homi Bhabha National Institute, SRM Institute of Science and Technology

and Manipal University were ranked in 501-600, 701-800, 901-1000 brackets respectively.

5.4 Other Indian Rankings

In India, it was the media which started the process of ranking of colleges. In 1997, India Today published a survey on best colleges for the first time. In 2004 India Today-ORG MARG identified the top 10 colleges in Arts, Science, Commerce, Law, Engineering and Medicine. India Today now ranks universities under five categories namely General (Private), General (Govt), Technical, Medical and Law. Business World ranks business schools of the country.

However, the factor of ranking has taken an obsessive form due to the extreme competitiveness and number of institutions available providing the same courses or curriculum. Irrespective of the inconsistencies in the formulation of ranking, a university ranking is necessary for inculcating a competitive spirit and to give the students and their parents an opportunity to objectively assess institutions before picking one.

6 CONCLUSIONS

The National Institutional Ranking Framework (NIRF) has made significant strides in transforming the landscape of higher education in India. By integrating modern assessment tools, refining the ranking processes, and aligning with the National Education Policy (NEP) 2020, the NIRF has introduced a more transparent, credible, and inclusive ranking system. The introduction of parameters like sustainability, regional language programs, and Indian Knowledge Systems addresses emerging educational priorities.

However, despite the improvements, the ranking framework still faces challenges. Anomalies in the weighting of parameters, such as perception, and inconsistencies in research evaluation, point to areas that need further refinement.

Overall, the NIRF reforms represent a transformative shift in how India assesses and ranks its higher education institutions, promoting a culture of continuous quality improvement and positioning Indian institutions to compete globally. These reforms aim to foster excellence, inclusivity, and accountability, contributing to the sustainable development of India's higher education system.

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Appendix: Overall and Parameter-wise Scores of Top HEIs in India Ranking 2024

Institute	Rank	Type	TLR (100)	RPC (100)	GO (100)	OI (100)	Perception (100)	Overall Score
IIT Madras	1	I	88.37	87.3	85.76	65.68	100	86.42
IISc Bangalore	2	CR	83.6	86.5	82.17	58.46	99.7	83.28
Indian Institute of Technology, Bombay	3	I	83.85	82.35	83.36	59.05	89.32	81.37
Indian Institute of Technology, Delhi	4	I	76.57	86.23	77.48	66.23	93.48	80.31
Indian Institute of Technology Kanpur	5	I	89.84	69.09	81.96	60.83	74.12	77.56
Indian Institute of Technology, Kharagpur	6	I	76.65	74.94	80.18	57.29	75.24	74.77
All India Institute of Medical Sciences, Delhi	7	CM	79.09	71.26	68.66	71.29	82.97	74.27
Indian Institute of Technology, Roorkee	8	I	76.55	70.48	79.14	62.91	52.89	71.52
Indian Institute of Technology Guwahati	9	I	76.33	64.43	81.35	61.96	43.43	69.04
Jawaharlal Nehru University	10	C	74.93	45.27	97.34	72.28	57.71	68.53
Banaras Hindu University	11	C	73.59	51.01	94.94	61.57	50.25	67.56
Indian Institute of Technology Hyderabad	12	I	78.96	56.59	73.33	59.21	54.34	66.69
Jamia Millia Islamia, New Delhi	13	C	71.29	49.28	92.72	83.1	29.78	66
Manipal Academy of Higher Education, Manipal	14	D	78.11	55.94	77.34	67.33	25.34	64.94
University of Delhi	15	C	56.75	56.42	98.54	67.57	43.93	64.81
Aligarh Muslim University	16	C	74.02	45.91	93.81	61.15	33.15	64.17
Jadavpur University	17	S	68.83	51.35	89.92	49.94	48.2	63.84
Amrita Vishwa Vidyapeetham, Coimbatore	18	P	76.51	47.82	77.63	73.83	36.07	63.81
Vellore Institute of Technology	19	D	61.51	61.95	79.42	61.11	39.35	62.97
Anna University	20	S	60.32	63.51	71.58	48.93	64.13	62.77
S.R.M. Institute of Science and Technology	21	D	71.69	55.43	76.92	68.55	17.02	62.07
Saveetha Institute of Medical and Technical Sciences	22	D	72.59	60.87	72.82	66.07	5.79	61.79
Birla Institute of Technology & Science - Pilani	23	D	66.06	57.83	75.19	58.49	28.11	60.87
Siksha `O` Anusandhan	24	D	74.09	42.19	74.06	72.74	37.65	60.73
University of Hyderabad	25	C	72.69	45.58	81.39	62.26	25.6	60.55
Calcutta University	26	S	70.01	42.11	92.19	50.17	31.61	60.25
Homi Bhabha National Institute, Mumbai	27	D	76.29	52.45	76.95	53.84	7.42	60.13
Kalinga Institute of Industrial Technology	28	D	74.74	42.01	79.53	76.35	13.72	59.94
Indian Institute of Technology, Gandhinagar	29	I	76.4	41.53	69.97	69.21	24.82	58.77
Indian Institute of Technology (BHU) Varanasi	30	I	57.16	54.95	76.25	57.97	40.09	58.69
National Institute of Technology, Tiruchirappalli	31	N	57.74	48.14	74.21	64.62	55.37	58.6
Chandigarh University	32	P	68.5	39.66	78.18	77.52	24.56	58.3
Indian Institute of Technology Indore	33	I	65.54	50.91	71.78	60.73	19.49	57.31
National Institute of Technology Rourkela	34	N	63.94	50.54	75.22	59.6	17.02	57.04
IIT (Indian School of Mines), Dhanbad	35	I	59.69	55.05	71.72	59.2	22.93	56.97
JSS Academy of Higher Education and Research	36	D	76.68	32.12	69.66	76.95	15.07	55.79
Savitribai Phule Pune University	37	S	61.07	39.17	89.65	52.59	24.29	55.69
Kerala University	38	S	74.52	26.72	94.82	58.19	4.52	55.61
Jawaharlal Institute of PG Med Edu & Research	39	CM	72.86	33.47	71.01	70.11	24.02	55.51
Koneru Lakshmaiah Education Foundation University	40	D	67.87	41.54	71.78	66.48	16.38	55.47
Andhra University, Visakhapatnam	41	S	75.44	26.05	85.19	64.68	10.13	54.97
Indian Institute of Science Edu& Research, Pune	42	R	72.8	72.8	61.53	62.28	21.53	54.86
Thapar Institute of Engineering and Technology	43	D	65	43.36	71.19	63.83	17.02	54.83
Bharathiar University	44	S	64.04	42.45	78.16	54.05	18.27	54.81
Lovely Professional University, Phagwara	45	P	57.1	49.75	66.63	69.81	22.1	54.58
National Institute of Technology, Surathkal	46	N	55.75	43.41	74.39	62.79	35.25	54.44
Shanmugha Arts Science Tech & Research Academy	47	D	69.41	37.64	71.47	66.23	11.24	54.14

Indian Institute of Technology Ropar	48	I	68.81	39.95	67.5	65.22	14.74	54.12
Amity University	49	P	56.77	50.31	71.92	65.59	9.75	54.04
Kalasalingam Academy of Research and Education	50	D	69.75	32.36	74.56	74.3	10.5	54.02
Cochin University of Science and Technology	51	S	71.68	35.53	73.76	56.1	14.74	53.99
Symbiosis International, Pune	52	D	72.53	27.49	78.53	64.79	17.34	53.93
National Institute of Technology Warangal	53	N	61.76	42.22	72.75	57.84	22.1	53.74
National Institute of Technology Calicut	54	N	66.21	32.44	72.82	68.16	26.88	53.66
Bharathidasan University	55	S	65.13	39.14	79.78	53.33	8.99	53.47
Institute of Chemical Technology, Mumbai	56	D	55.91	45.68	75.08	55.39	23.48	53.38
Gauhati University	57	S	71.82	24.11	88.28	60.98	7.42	53.28
Babasheb Bhimrao Ambedkar University, Lucknow	58	C	69.31	25.46	80.94	78.63	7.82	53.26
UPES, Dehradun	59	P	64.11	41.19	60.62	65.76	27.62	53.05
Panjab University	60	S	54.31	42.01	74.07	63.38	63.38	52.99
Indian Institute of Science Education & Research	61	R	68.89	39.53	66.79	54.52	15.73	52.91
Jamia Hamdard, New Delhi	62	D	68.66	34.45	70.2	66.17	12.32	52.83
Dr. D. Y. Patil Vidyapeeth	63	D	74.46	26.12	63.1	61.74	37.45	52.72
Indian Institute of Science Edu& Research, Mohali	64	R	67.38	32.89	70.81	66.14	17.34	52.58
University of Madras	64	S	69.31	38.5	65.47	53.22	18.27	52.58
Delhi Technological University	66	S	63.18	37.87	67.5	56.65	29.07	52.38
Mahatma Gandhi University, Kottayam	67	S	71.36	37.27	70.97	70.97	4.09	52.3
Indian Institute of Technology Jodhpur	68	I	71.5	34.91	63.56	67.12	8.99	52.24
University of Kashmir	69	S	71.14	31.25	79.72	51.14	3.66	52.14
Osmania University	70	S	64.75	28.77	85.33	58.05	10.87	52.02
Datta Meghe Institute of Higher Eduand Research	71	D	71.49	38.33	61.26	64.14	1.41	51.75
Indian Institute of Technology, Mandi	72	I	65.48	38.39	61.96	70.37	10.87	51.68
Indian Institute of Technology, Patna	73	I	60.25	42.04	70.12	54.1	11.24	51.24
All India Institute of Medical Sciences, Rishikesh	74	CM	74.07	35.35	50.68	69.13	13.37	51.22
Indian Statistical Institute, Kolkata	75	C	68.05	32.99	67.59	45.27	27.37	51.1
Alagappa University	76	S	65.88	35.3	73.76	51.91	7.82	51.07
Visvesvaraya National Institute of Tech, Nagpur	77	N	62.96	37.25	68.6	55.82	16.7	51.03
Indian Institute of Science Edu& Research Bhopal	78	R	69.14	31.99	65.96	67.87	6.2	50.94
Graphic Era University, Dehradun	79	D	59.9	33.86	62.93	66.08	32.5	50.58
Punjab Agricultural University, Ludhiana	80	S	74.19	32.43	64.12	49.58	7.82	50.55
Sri Sivasubramaniya Nadar College of Engineering	81	P	61.3	39.4	67.32	57.14	10.5	50.43
Malaviya National Institute of Technology, Jaipur	82	N	58.02	42.66	69.7	52.47	10.13	50.41
All India Institute of Medical Sciences Jodhpur	83	CM	72.7	33.93	56.36	60.62	6.2	49.94
SVKM`s Narsee Monjee Institute of Mgmt Studies	84	D	74	24.83	64.38	65.17	5.37	49.59
Sathyabama Institute of Science and Technology	85	D	59.05	36.3	63.32	70.64	11.96	49.52
Mysore University	86	S	70.8	19.35	79.51	57.96	7.02	49.45
University of Jammu	87	S	72.95	23.43	74.91	52.72	2.32	49.4
King George`s Medical University, Lucknow	88	S	72.12	27.45	62.81	56.24	9.37	48.98
Shoolini University of Biotech and Mgmt Sciences	89	P	54.64	39.24	68.7	65.98	4.52	48.95
Christ University	90	D	58.34	22.05	66.49	72.84	39.72	48.66
Bharath Institute of Higher Education and Research	91	D	67.46	22.62	67.73	71.19	9.37	48.64
National Institute of Technology, Silchar	92	N	50.88	43.7	69.93	56.42	5.37	48.55
National Institute of Technology Durgapur	93	N	57.81	32.74	71.05	57.97	11.24	48.29
Gujarat University	94	S	67.97	17.53	81.99	57	4.09	48.16
Shiv Nadar University	95	P	71.43	25.51	59.74	66.79	4.09	48.12
Sri Ramachandra Institute of Higher Edu and Research	96	P	72.73	22.22	62.46	62.99	8.21	48.1
Acharya Nagarjuna University, Guntur	97	S	64.38	17	82.97	65	2.32	47.73
Tata Institute of Social Sciences, Mumbai	98	D	66.96	15.83	71.49	72.19	11.96	47.56
All India Institute of Medical Sciences, Patna	99	CM	69.57	20.49	60	66.08	19.19	47.55
Periyar University, Salem	100	S	61.51	29.46	69.58	59.86	2.32	47.43