

## Ranking Model for Indian Higher Educational Institutions through NIRF

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First time in the history of independent India, the Government of India, took up the initiative to launch a Nationwide Ranking framework to rank the educational institutions in the country. The National Institutional Ranking Framework (NIRF) was launched by Ministry of Human Resource Development on 29<sup>th</sup> September 2015 and ranking was announced on 4<sup>th</sup> April, 2016. The major role was played by UGC, AICTE, NBA and INFLIBNET in ranking of the institutions. INFLIBNET was entrusted with the responsibility of carrying out the implementation of the NIRF. This paper provides an overview of the various challenges and opportunities for improvement in the next interaction of the NIRF implementation.

### 1. Introduction

India, with 1.29 billion people, is the second most populous country in the world. India represents approximately 17.31% of the world's population, which means one out of six people on this planet live in India. More than 50% of India's current population is below the age of 25 and over 65% below the age of 35. About 72.2% of the population lives in around 6,38,000 villages and the rest 27.8% in around 5,480 towns and urban agglomerations.

The total population between the age range of 15 and 24 in India is 234 million. If India is to meet its 30 percent Gross Enrolment Ratio target by 2020, about 40 million students would be enrolled in the higher education system in 2020. Currently, around 18.5 million students are enrolled in the higher education system. There is a massive mismatch in the supply-demand, of proportions that have never been seen anywhere or anytime in the world before. The nation suffers from both a crippling quantity, as well as a quality challenge, when it comes to higher education.

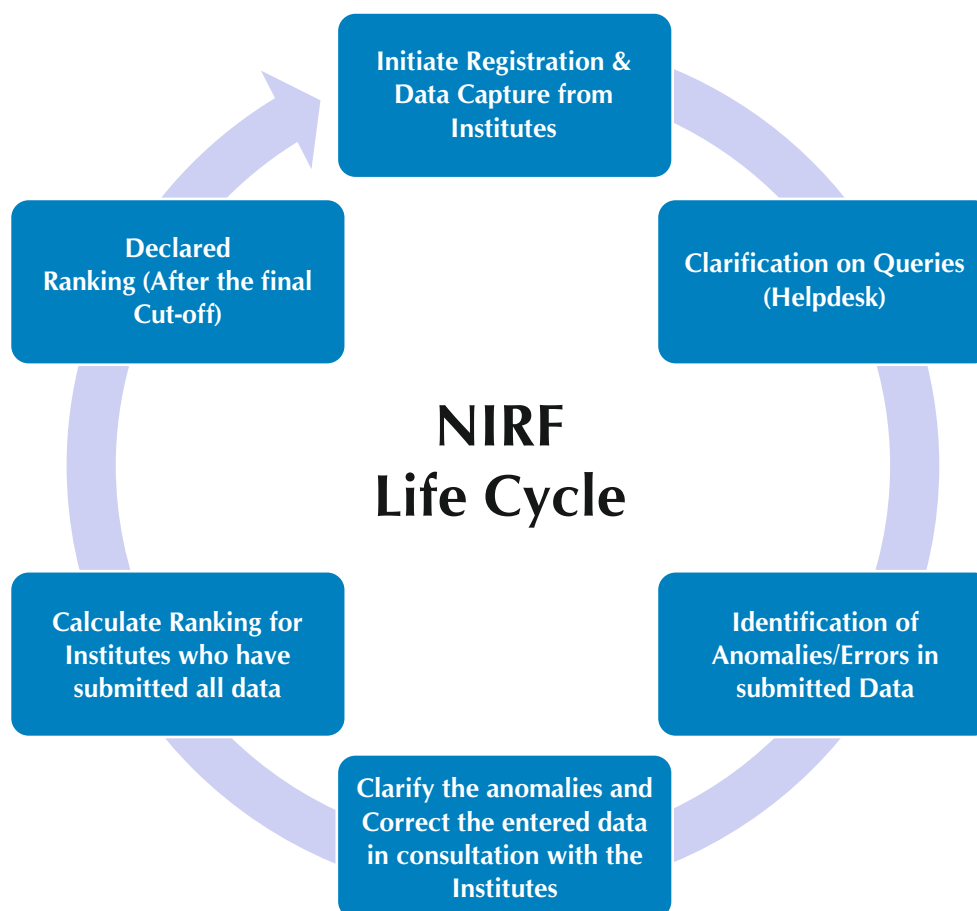
While there is a huge gap in the supply and demand structure for the higher education which Indian government is trying to deal with, there is need to provide structured and analysed information to the aspiring students by the institutions of higher education

having expertise with qualitative human and other resources. India's huge pool of youngsters can be considered as its biggest strength but these young researchers in the higher education institutions are at a risk of losing out on the quality of research that they undertake due the lack of information about choice of research, lack of good infrastructure and available pool of experts to guide their innovative ideas into policy-orientated research.

The National Institutional Ranking Framework (NIRF) was approved by the MHRD and launched by Honourable Minister of Human Resource Development on 29<sup>th</sup> September, 2015. This framework outlines a methodology to rank institutions across the country. The methodology draws from the overall recommendations and broad understanding arrived at by a Core Committee set up by MHRD to identify the broad parameters for ranking various universities and institutions. The parameters broadly cover "Teaching, Learning and Resources," "Research and Professional Practices," "Graduation Outcomes," "Outreach and Inclusivity," and "Perception".

Although the Ranking Frameworks are similar, the exact methodologies are domain specific. Ranking methods were worked out for 6 categories of institutions i.e., Engineering, management, Pharmacy, Architecture, Universities and Colleges.

## 2. Life Cycle of NIRF



The INFLIBNET team, with guidelines from NBA, initially worked on the Data Capturing Process along with registration of institutes. The educational Institutes registered themselves on NIRF Portal to participate in the ranking process. The registration process was opened till 15<sup>th</sup> January 2016. The registered institutes were allowed to enter or modify their data. The educational Institutes raised numerous queries on the framework as well as on data to be provided for ranking. A full-fledged team was deployed at INFLIBNET to answer the queries raised by the educational Institutes and hand-hold them in filling the data online / offline. The registered educational Institutes were given time till 22<sup>nd</sup> January 2016 for data submission. Some Institutes submitted all data, while some Institutes submitted only partial data. Ranking was calculated only for those Institutes who submitted complete data.

Soon after completion of data capturing process, the process of ranking started. Anomalies were found in the data, entered by institutes, i.e. some of the data-fields were left unfilled/blank, information provided by the institutes were inaccurate. With the approval of NBA, INFLIBNET started cleaning the data entered by the institutes. Wherever anomalies and inconsistencies were found, institutes were called or e-mails were sent to them with request to provide the correct data.

Once the anomalies and inconsistencies were attended to (not 100%) and after final submission of the corrected data by the institutes, the process of ranking was again initiated. With the discussion and approval from NBA team, some deviations were done in the formula with respect to original framework. After further exercise on ranking, the ranking report was created.

### 3. NIRF Parameters for Ranking Institutions

The NIRF provides for ranking of institutions in five broad generic parameters, namely: i) Teaching, Learning and Resources; ii) Research, Consulting and Collaborative Performance; iii) Graduation Outcomes; iv) Outreach and Inclusivity; and v) Perception.

<b>Teaching, Learning and Resources (TLR)</b>	<b>Research Productivity, Impact and IPR (RPII)</b>
Faculty Student Ratio - Permanent Faculty (FSR)	Combined Metric for Publications (PU)
Faculty Student Ratio - Visiting Faculty (FSR)	Combined Metric for Citations (CI)
Metric for Faculty with Ph.D. and Experience (FQE)	Intellectual Property Right and Patents (IPR)
Metric for Library, Studio & Laboratory Facilities (LL)	% of Collaborative Publications and Patents (CP)
Metric for Sports and Extra Curricular Facilities (SEC)	Footprint of Projects and Professional Practice (FPPP)
Metric for Teaching and Innovation (TI)	<b>Graduation Outcome (GO)</b>
<b>Outreach and Inclusivity (OI)</b>	Performance in University Examinations (PUE)
Outreach Footprint (Continuing Education, Services) (CES)	Performance in Public Examinations (PPE)
Percentage of Students from Other States / Countries (RD)	Performance in Placement, Higher Studies and Entrepreneurship (PHE)
Percentage of Women Students and Faculty (WS)	Mean Salary for Employment (MS)
Percentage of Economically and Socially Disadvantaged Students (ESDS)	<b>Perception (PR)</b>
Facilities for Physically Challenged / Differently Abled Persons	Process for Peer Rating in Category (PR) and Application to Seat Ratio (SR)

### 4. Common Mistakes made by the Institutes during filling the Data-Form

The most time consuming process and the man-power-intensive effort in the ranking lifecycle was to educate institutions to fill-in the data capturing form and subsequently cleaning of data. There were number of anomalies and issues on the data entered by the institutes. As per our analysis and experience, common mistakes committed by the institutes were as follows:

- i) One of the major mix-up was unit used for Data i.e. amount was asked in Lakhs but given in Rupees, likewise area was asked in sq. meters but entered in acres, yard, etc. (without mentioning the unit of measurement used).
- ii) Average salary for placement given by some institute was not between minimum salary and maximum salary.
- iii) Faculty count in the faculty summary was exceeding the number of faculty in the faculty Master.
- iv) In the student summary, number of students admitted within state, outside state, outside country was not entered. Most institutions entered "0" in the data-fields or left it blank to complete the formalities. This was a very important parameter in 'Outreach' (Regional Diversity).

- v) Similarly, in the student summary, no. of socially challenged data was also not given properly, i.e. socially challenged students was more than total student.
- vi) Another important parameter was students graduating in minimum time. The intention of this question was to obtain total no. of students who passed out in a batch including lateral admission but it was observed that no. of students passed was greater than the no of students admitted. The helpdesk also observed that some of the coordinators did not understand meaning of the lateral entry and graduating in minimum time.
- vii) For the Public Examination, numerous names of examinations were entered by the institutes that were not verifiable. For engineering alone, there were 2040 distinct names of competitive examinations whose toughness could not be determined.
- viii) For campus placement, the student placed in campus was exceeding the graduating students.
- ix) The number of entrepreneurs produced over a period of 10 years was exceeding no. of students passed.
- x) In the student event details, institutions were asked to provide data for the state, national, International level, but institutes have entered all type of events. It was difficult to identify and remove the odd ones.

## 5. Conclusion / Suggestions

This write-up has attempted to portray an overview of various challenges and hurdles encountered during the 2016 Indian rankings and also provide suggestions to mitigate these challenges/hurdles. The biggest

challenge faced was incorrect or null data filled-up by the institutes. So much time and effort and manpower were spent on trying to remove these inconsistencies. If the Institutes were sensitized on entering correct and validated data, then the ranking process could have been smoother and error-free.

With experience gained during of interactions with the institutes through help desk, the modified process of interaction for Indian Rankings 2017 should be as follows:

**Step-1:** Registration of institutes on the basis of clear guidelines on categories for ranking. Category (A & B) of institution, need to merge in single category.

**Step-2:** Awareness programme across the country (on basis of no of registered institute) in a given region. It may be online through video conferencing or on-campus in a given region.

**Step-3:** Detail video tutorials and help manuals for “Data Capturing System”.

**Step-4:** Data Capturing system should be launched only after step 1 to 3.

**Step-5:** Through data checking for errors and inconsistencies, verification and cleaning of data.

**Step-6:** Ranking and Reports.

## 6. Reference

- i) Population of India 2016- Current Population of India. (2016). Indiaonlinepages.com. Retrieved from <http://www.indiaonlinepages.com/population/india-current-population.html>
- ii) MHRD, National Institute Ranking Framework (NIRF). (2016). Nirfindia.org. Retrieved from <https://www.nirfindia.org>