

A Methodology for Ranking of Management Institutions in India



Department of Higher Education Ministry of Human Resource Development Government of India 2015

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मंत्री मानव संसाधन विकास भारत सरकार MINISTER HUMAN RESOURCE DEVELOPMENT GOVERNMENT OF INDIA

रमृति ज़ूबिन इरानी Smriti Zubin Irani

Message

I am very pleased to launch the Ranking System Framework for Higher Educational Institutions of India. This is the first time that a reliable, transparent and authentic ranking system is being implemented in the country for Higher Education.

The primary purpose of this framework is to galvanize Indian institutions towards a competitive environment that exists in the world today. Clear definition and identification of key parameters can help institutions to work sincerely towards improving their ranking. These parameters are strong pointers of quality of scholarship of the faculty & students and the student-caring culture of the institutions. There is also a strong message in the chosen parameters, which is particularly relevant to the education scenario in our country.

I sincerely hope that institutions will use this ranking framework to introspect and make sincere efforts to improve their standing, which will be beneficial for the country. Ranking and Accreditation are two important tools for a movement towards quality, and I am happy that we are taking this strong step in the direction of a transparent and clearly defined ranking framework.

The Ranking framework will empower a larger number of Indian Institutions to participate in the global rankings, and create a significant impact internationally too. I see this as a sensitization process and an empowering tool, and not a tool for protection.

I appreciate the efforts of the Core Committee, which has delivered this long pending task in a very short time. I am confident that with this document and the consequent ranking of Higher Institutions, these Institutions will earn significant trust of students, academicians, industry and governments.

SMRITI ZUBIN IRANI

Preface

This document represents the outcome of several intense deliberations of the Core Committee, set up by MHRD, to develop a ranking framework for academic institutions of India.

The wide diversity of academic institutions and Universities makes this an extremely challenging task. India's higher educational system can be described as anything but simple. It has a complex multi-layered structure, with diversity of disciplines, levels and nature of financial support, autonomy, and many other parameters. At the top end of the spectrum, we have the IIT's and the IISc, and several reputed Central Universities; at the middle level, we have a host of Central and State Universities, and some of the so-called Private and Deemed-to-be-Universities; and at the other end we have a large number of undergraduate colleges leading to a Bachelor's degrees (and some times Diplomas) in a variety of disciplines like Sciences, Arts, Engineering and others. This is unlike most global practices, where the structures are well defined, and diversity of forms limited to a very few number. In the most generic structure, there is a comprehensive University with schools in many disciplines, each of which individually offers all levels of degree programs: from Bachelor's to the Doctoral.

In the early stages of its work, it became clear to the Core Committee that a single ranking framework for such a complex scenario of institutions would be counter productive, and even meaningless. This led to the conclusion that a ranking framework should be designed that enables an apple-to-apple comparison. It was agreed, therefore, that institutions belonging to different sectoral fields, such as Engineering, Management, etc. should be compared separately in their own respective peer groups. Comprehensive universities, which encompass a large number of academic programs including Arts, Humanities, Sciences etc., should similarly form a separate peer group for comparison. Further, within each sectoral discipline, there is scope for separate ranking in two categories, viz., institutions, which are engaged in both Research and Teaching, and those primarily engaged in Teaching.

While this broad approach seemed to be of universal appeal, there remained the challenge of identifying a small set of nearly common parameters (with suitable possibility of tweaking to suit the needs of individual specific domains). This took an enormous effort of the Committee in the form of several meetings and brainstorming sessions and a large number of email exchanges, to sort out. It took a marathon meeting of the Core Committee under the Chairmanship of Secretary Higher Education, to bring down the number of these parameters to no more than a score or so, under five broad headings: (1) Teaching, Learning and Resources; (2) Research, Consulting and Collaborative Performance; (3) Graduation Outcomes; (4) Outreach and Inclusivity and (5) Perception. This provided the necessary breakthrough to take the matter forward.

At this stage, it was decided to prepare a draft framework, with details of methodology for developing metrics for these parameters. The biggest challenge here was coming up with easily measurable and reportable parameters, which could be quantified and converted to performance metrics. Several difficulties had to be resolved. How do we define the parameters to avoid ambiguities in their interpretation and consequently incorrect or inconsistent data from different institutions? Another consideration was the possibility of obtaining some of the important data from reliable third-party sources and independent databases. Since this could be challenging for all parameters of interest, especially in the Indian context, it was equally important that the data be verifiable, in order to keep the exercise credible. Finally, these parameter values had to be converted to performance metrics, which could be indicators of performance in a broad group of similar activities.

Consultations with several colleagues from the Core Committee helped overcome many of these challenges. However, in a maiden exercise like this, there are bound to be shortcomings. We request the public and the experts alike to treat them with some indulgence and give us their valuable and insightful inputs for future improvements. For a task like this, a constant review and updating of the methodology is a must, and the feedback will be invaluable in improving the methodology from year to year. It is our fond hope that the methodology outlined here would start a new era of accountability in higher education in the country.

Surendra Prasad

Chairman, National Board of Accreditation Member, Core Committee (On behalf of all members of the Core Committee)

F.No. 19-6/2013-TS.I (Sectt.) Government of India Ministry of Human Resource Development Department of Higher Education Technical Section-I

Shastri Bhawan, New Delhi, Dated the 09th October, 2014

ORDER

In the one-day Workshop on Ranking held on 21st August, 2014 where representatives of Central Universities, NITs, IIITs, SPAs and IISERs were invited, it was inter-alia decided to constitute a Committee on evolving a National Ranking Framework. Further, during the Hon'ble HRM's conclave with the IIMs and Central Universities, it was decided that representatives of Central Universities and IIMs would also be included in the Committee to be constituted for evolving a National Ranking Framework in the country.

2. Pursuant to the above, a Committee comprising of the following is hereby constituted:-

1.	Secretary (HE), MHRD	Chairperson
2.	Director, IIT-Kharagpur	Member
3.	Director, IIT-Madras	Member
4.	VC, Delhi University	Member
5.	VC, EFL University, Hyderabad	Member
6.	VC, Central University of Gujarat, Gandhinagar	Member
7.	VC, JNU, New Delhi	Member
8.	Director, IIM Ahmedabad	Member
9.	Director, IIM Bangaluru	Member
10.	Director, NIT, Warangal, Telangana	Member
11.	Director, SPA, Delhi	Member
12.	Director, ABV-IIITM, Gwalior	Member
13.	Director, IISER, Bhopal	Member
14.	Chairperson, NBA, New Delhi	Member
15.	Director, NAAC, Bangaluru	Member
16.	Additional Secretary (TE), MHRD	Member Secretary

The terms of reference of the Committee are as under:

- a) Suggest a National Framework for performance measurement and ranking of
 - i. Institutions;
 - ii. Programmes;
- b) Suggest the organizational structure, institutional mechanism and processes for implementation along with time-lines of the National Ranking Framework.
- c) Suggest a mechanism for financing of the Scheme on National Ranking Framework.
- d) Suggest linkages with NAAC and NBA, if any.

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Distribution: All members of the Committee

Copy to:

- 1. PS to HRM
- 2. PSO to Secretary (HE)
- 3. PSO to AS (TE)
- 4. PS to JS (HE)
- 5. Sr. PPS to JS&FA
- 6. PPS to Director (IITs)
- 7. PS to Director (MGT)
- 8. PS to Director (NIT)



Executive Summary

This document presents a methodology to rank management institutions across the country. The methodology draws from the broad understanding arrived at by a Core Committee (CC) set up by Ministry of Human Resource Development (MHRD) regarding the broad parameters for ranking various Universities and Institutions. The ranking parameters proposed by the Core Committee (CC) are generic, and need to be adapted for evolving a detailed methodology for discipline specific rankings.

This document focuses on management institutions. The main features of the methodology proposed are as follows:

- 1. There will be an Implementation Core Committee (ICC), which will oversee the implementation of ranking work for the first year, after which a suitable Ranking Agency duly authorized to receive and verify the data, and declare the rankings, would be set up.
- 2. The document identifies a set of suitable forms in which these parameters can be easily measured and verified across a variety of institutions.
- 3. A strategy is proposed for calculating scores to measure the performance of an institution across each such parameter. This helps to obtain an overall score for obtaining the institution rank.
- 4. A two-category approach is proposed to ensure that an institution is compared with an appropriate peer group of institutions, and provide a level-playing field to all.
- 5. A system for data collection from public bodies and random sample checks is proposed for each parameter.

1. Salient Features:

- 1.1 Methodology is based on developing a set of metrics for ranking of management institutions, based on the parameters agreed upon by the Core Committee (CC).
- 1.2 These parameters are organized into five broad heads, and have been further elaborated into suitable sub-heads. Each broad head has an overall weight assigned to it. Within each head, the sub-heads also have an appropriate weight distribution.
- 1.3 An attempt is made here to first identify the relevant data needed to suitably measure the performance score under-each sub-head. Emphasis here is on identifying data that is easy to generate and easily verifiable, if verification is needed. This is important in the interest of transparency.
- 1.4 A suitable metric is then proposed, based on this data, which computes a score under each sub-head. The sub-head scores are then added to obtain scores for each individual head. The overall score is computed based on the weights allotted to each head. The overall score can take a maximum value of 100.
- 1.5 The institutions can then be rank-ordered based on their scores.

2. Ranking Based on Institution Categories

- 2.1 In view of the diversity in nature and quality of the Management institutions in the country, it is proposed that ranking be done separately across two distinct categories.
- 2.2 The two categories will be distinguished on the basis of their primary mandate as follows:
 - Category A: Institutions engaged in Research and Teaching.
 - Category B: Institutions engaged primarily in Teaching.
 - Category B institution may choose to be ranked in both categories.
- 2.3 All institutions that have been granted academic autonomy (by the appropriate authorities) will normally be classified as Category A institutions. All those affiliated to a University will be classified as Category B institutions. An autonomous college, however, which

is engaged primarily in teaching, may also opt for being ranked in Category B. To elaborate, Category A would comprise of Institutions of National Importance set up by an Act of Parliament, State Universities, Deemed-to-be-Universities, Private Universities and other autonomous colleges. Category B institutions, on the other hand, are affiliated to a University and do not enjoy full academic autonomy.

- 2.4 While score computations for some of the parameters is similar for both of these categories on most counts, the benchmarks are somewhat different on a few parameters, to take into account the ground realities, which may be very different for the two categories. This also creates a level playing field for both categories.
- 2.5 The weights assigned to different components have been slightly adjusted to reflect the different mandates and expectations from institutions of the two categories.
- 2.6 Even where the assessment metrics are similar, their computation (where percentile calculations or normalizations are involved) is based on institutions of the corresponding category for these to be relevant and fair.
- 2.7 If implemented in this manner and spirit, the ranking methodology will produce two separate rankings, one for each category.

3. Data Collection

- 3.1 In view of the absence of a reliable and comprehensive Database that could supply all relevant information at this time (as needed for computing the said scores), it is imperative that the institutions that are desirous of participating in the ranking exercise be asked to supply the data in a suitable format.
- 3.2 It is recommended that the submitted data be also uploaded on their own, publicly visible website in the interest of transparency. The data should remain there in an archived form for the next 3 years to enable easy cross-checking, wherever required. Institutions that fail to do this honestly or resort to unethical practices should be automatically debarred from participation in the future Ranking Surveys for a period of two years. Their names may also be displayed on the Ranking Portal indicating the

- nature of their unethical conduct. An attempt should also be made by the Ranking Authority to maintain the archived form of this data for due diligence as needed.
- 3.3 The Ranking Authority or Agency or Board should be empowered to take up a random check on the institution records and audited accounts to ensure that the principles of ethical behavior are being adhered to.
- 3.4 For some of the parameters, the data could be populated from internationally available Databases (like Scopus, Web of Science, or Google Scholar etc.). This is indicated in the Assessment Metrics. The Ranking Agency should directly access data from these resources, if necessary for a payment.
- 3.5 Similarly, some data can be made available through a national effort. For example, data about success in public examinations can be easily compiled, if all concerned bodies (UPSC, GATE, NET, CAT, GMAT, CMAT etc.) conducting such examinations prepare an institution-wise list providing details of the total number of aspirants and successful candidates from each institute.
- 3.6 Similarly Universities, including affiliating ones, should be able to provide examination results data in the appropriate format to evaluate the component of Graduate Outcomes (GO).

4. Miscellaneous Recommendations

- 4.1 It is recommended that the proposed metrics be presented to the Core Committee (or another independent committee as deemed appropriate) for their comments and possible improvements, especially to assess the suitability of the metrics and data used for computing these. Suggestions may also be invited from the general public.
- 4.2 An Implementation Committee should be set up to oversee the process initially.
- 4.3 A few institutions from both Category A and B should be asked to fill the data from previous years to complete a mock exercise and validate the metrics proposed here.
- 4.4 This document has been prepared with management institutions in mind.

5. Implementation Details

- 5.1 A suitable Ranking Authority/Agency should be identified or formed and empowered. Instead of creating another organization, however, it may also be visualized as a Virtual Authority, authorized to outsource parts of the work (including data analytics) to various survey organizations. The entire effort could be self-supporting, if the institutions desiring to participate be charged a suitable fee for this purpose. Initially, the ranking agency should be provided with a seed funding to roll out the process in a time-bound manner.
- 5.2 The Ranking Agency should invite institutions intending to participate in the ranking exercise to submit their applications in the given format by 31st December. The data should be submitted on an On-line facility created for this purpose.
- 5.3 The Ranking Agency will then extract the relevant information from this data and through software, compute the various metrics and rank institutions based on this data. As mentioned earlier, both these components of work could be outsourced suitably. This process should be completed in about 3 months, and rankings published ahead of the next year's admission schedule.

Part - I
Parameters and Metrics
for
Category 'A' Institutions

Overview: Category 'A' Institutions

Summary of Ranking Parameters Finalized by MHRD

Sr. No.	Parameter	Marks	Weightage
1	Teaching, Learning & Resources (TLR)	100	0.30
2	Research, Professional Practice & Collaborative Performance (RPC)	100	0.30
3	Graduation Outcome (GO)	100	0.15
4	Outreach and Inclusivity (OI)	100	0.15
5	Perception (PR)	100	0.10

Cumulative Sheet

Sr. No.	Parameter	Weightage/Marks
1	Teaching, Learning and Resources (TLR)	Ranking Weightage = 0.30
	A. Faculty Student Ratio with Emphasis on Permanent Faculty	30 Marks
	B. Combined Metric for Faculty with Ph.D and Experience	30 Marks
	C. Metric for Library Facilities	15 Marks
	D. Metric for Sports and Extra Curricular Facilities, Activities	10 Marks
	E. Metric for Teaching and Innovation	15 Marks
2	Research, Professional Practice & Collaborative Performance (RPC)	Ranking Weightage = 0.30
	A. Combined Metric for Publications	35 Marks
	B. Combined Metric for Citations	35 Marks
	C. Percentage of Collaborative Publications	10 Marks
	D. Footprint of Executive Education and Professional Practice	20 Marks
3	Graduation Outcome(GO)	Ranking Weightage = 0.15
	A. Combined Percentage for Placement, Higher Studies and Entrepreneurship	70 Marks
	B. Mean Salary for Employment	30 Marks
4	Outreach and Inclusivity(OI)	Ranking Weightage = 0.15
	A. Outreach Footprint (Continuing Education, Service)	20 Marks
	B. Percentage of Students from Other States/Countries-Region Diversity	20 Marks
	C. Percentage of Women Students and Faculty	30 Marks
	D. Percentage of Economically and Socially Disadvantaged Students	20 Marks
	E. Percentage of Physically Challenged Students	10 Marks
5	Perception(PR)	Ranking Weightage = 0.10
	Process for Peer Rating in Category	100 Marks

1

Teaching, Learning & Resources (TLR)

Teaching, Learning & Resources (TLR) - 100 Marks

Ranking Weight: 0.30

Overall Assessment Metric:

$$TLR = (FSR + FQE + LI + SEC + TI)$$

The component metrics are explained on the following pages.

1.a Faculty-Student Ratio with Emphasis on Permanent Faculty (FSR): 30 Marks

Assessment will be based on the ratio of number of regular faculty members in the Institute and total sanctioned/approved intake considering full time Programs.

Regular appointment means tenured or tenure-track faculty on full time basis with no time limit on their employment. However, full-time faculty on contract basis for a period of not less than 3 years, on gross salary similar to those who are permanent can also be included.

Only faculty members with Ph.D qualifications should normally be counted here. Faculty with lower than MBA qualification can not be counted.

Visiting faculty (with a Ph.D) who are visiting the institution on a full time basis for at least one year can be included in the count for that semester as explained below.

Assessment metric will be the same for Category A and Category B Institutions.

$$FSR = 30 \times Min [10 \times (F/N), 1]$$

Here,

N: Total number of students studying in the institution considering all PG Programs, including the Ph.D program.

F₁: Full time regular faculty of all PG Programs in the previous year.

 F_2 : Eminent faculty (with Ph.D) visiting the institution for at least one year on a full time basis can be counted (with a count of 0.5 for each such visiting faculty for a semester) in the previous year.

$$F = F_1 + 0.3F_2$$

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Benchmarks:

Expected ratio is 1:10 to score maximum marks.

For F/N < 1: 50, FSR will be set to zero.

Data Collection:

From the concerned Institutions in prescribed format on an On-line facility. As mentioned in the preamble, an institution will be eligible for ranking, if all relevant and updated data about the faculty members (in the previous three years) is available on a publicly visible website. The data will be archived and also duplicated by the ranking agency.

Data Verification:

By the Ranking Agency on a random sample basis.

1.b Combined Metric for Faculty with Ph.D and Experience (FQE) - 30 Marks

It is proposed to give equal weightage (15 marks each) to both qualifications and experience.

Doctoral Qualification:

This will be measured on the basis of percentage of faculty with Ph.D in a relevant field. The expected benchmarks would be different for Category A and Category B Institutions to account for ground realities.

Assessment metric for Category A Institutions on Ph.D Qualification:

$$FQ = 15 \times (F/95)$$
, for $F \le 95\%$

$$FQ = 15$$
, for $F > 95\%$.

Here,

F is the percentage of Faculty with Ph.D. averaged over the previous 3 years.

(Implies that the expected percentage is a minimum of 95% to score maximum score, decreasing proportionately otherwise).

Experience Metric:

Experience would normally be assessed based on Average relevant experience of the faculty members. Relevance here pertains to experience in the subject area being taught by the faculty member.

More specifically,

$$E = \frac{\sum E_i}{F}$$

Here,

E, denotes the experience of the i'th faculty member.

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To simplify, **E**_i may also be calculated from the age profile of the faculty members as follows:

$$E_i = A_i - 30$$
, for $A_i \le 45$ years.

$$E_{i} = 15$$
, for $A_{i} > 45$ years.

Assessment Metric for Experience:

$$FE = 15 \times (E/15)$$
, for $E \le 15$ years;

$$FE = 15$$
, for $E > 15$ years.

Here,

E is the average years of experience of all faculty members as calculated above.

This implies that the benchmark average experience is to be fifteen (15) years to score maximum marks, decreasing proportionately otherwise.

Data Collection:

Institutions to submit information in a tabular form indicating faculty name, age, qualifications (indicating the University attended for the qualifying degree) and experience under the categories academic and industrial. Updated data for the last 3 years should be available on a publicly available website, and suitably archived for consistency check in subsequent years.

Data Verification:

On a random sampling basis.

Combined Metric for Faculty Qualifications and Experience:

$$FQE = FQ + FE$$

1.c Metric for Library Facilities (LI) – 15 Marks

Library:

LI = 15 × (Percentile parameter on the basis of annual expenditure (EXLI) on library resources per student)

EXLI = EXLIPS + EXLIES

EXLIPS = EXLIP/N

 $EXLIES = 2 \times EXLIE/N$

Here,

EXLIP: Actual Annual Expenditure on Physical Resources, Books, Journals, etc.

EXLIE: Actual Annual Expenditure on Electronic Resources, Books, Journals etc.

If this expenditure is below a threshold value to be determined separately for each category of institutions, EXLI = 0.

1.d Metric for Sports and Extra-Curricular Facilities, Activities (SEC) – 10 Marks

Extra-Curricular (EC) activities may typically include, but not limited to Clubs/Forums, NCC, NSS etc.

Parameters to be used:

- Sports facilities area per student (A);
- Actual expenditure per student on Sports and EC activities (B) and;
- Number of top positions in inter-college event (C).

Each parameter to be evaluated on a percentile basis to obtain the percentile parameter p(A), p(B) and p(C). Weights assigned to the 3 components are 0.5, 0.25 and 0.25, respectively.

SEC =
$$10 \times [p(A)/2 + p(B)/4 + p(C)/4]$$
.

Data Collection:

To be obtained from the institutions.

Data Verification:

By Ranking Agency on a random sample basis.

1.e Metric for Teaching and Innovation (TI) - 15 Marks

Introduction of On-line Courses including Massive Open Online Courses (MOOCs) and Cases provide valuable supplementary tools for enhancing the learning experience of the students.

This component captures teaching and innovation (TI) through distant learning modes such as MOOCs and teaching cases for management schools. Introduction of MOOCs provides valuable supplementary tool for enhancing the learning experience of the students. Teaching cases are an essential part of management teaching.

$$TI = MOOCs (10) + Cases (5)$$

 $MOOCs = 10 \times (M/M*)$

Here.

M = Number of MOOCs offered in the current year/number of faculty

M* is the maximum value of M

Cases =
$$5 \times (C/C^*)$$

Here,

C = Number of Teaching Cases published in a year/number of faculty (Only cases published in HBS and IVEY portals are considered).

C* is the maximum value of C

$$TI = MOOCs + Cases$$

2

Research, Professional Practice & Collaborative Performance (RPC)

Research, Professional Practice & Collaborative

Performance (RPC) - 100 Marks

Ranking Weight: 0.30

Overall Assessment Metric:

$$RPC = (PU + CI + CP + FEPP)$$

The component metrics are explained on the following pages.

2.a Combined Metric for Publications (PU) - 35 Marks

It is proposed that publications in journals listed in FT-45, Scopus and Google Scholar only will be counted for assessment. An average value P for the previous three (3) years will be computed as detailed later in this item.

The Institution will submit faculty publication list as supporting information.

Assessment Metric for Publications:

$$PU = 35 \times PF/PF^*$$

Here,

PF* is the maximum value of PF in the consideration set.

$$PF = (P/F)$$

P = Number of publications = Average of number of publications appearing in journals over the previous three (3) years.

$$P = (0.3PFT45 + 0.6PS + 0.1PG)$$

Here,

PFT45: Number of publications reported in FT-45

PS: Number of publications reported in Scopus

PG: Number of publications reported in Google Scholar

F is the number of regular faculty members as used in Item 1.

2.b Combined Metric for Citations (CI) - 35 Marks

The proposed assessment is based on the ratio of the total number of citations of publications of current full-time faculty over their entire tenure to the number of full-time faculty. For all such publications, an average of the numbers from the three popular databases will be used.

Institutions will be asked to provide information in a tabular form giving relevant details. However, the primary sources will be the three standard Data Bases: Scopus, Web of Science and Google Scholar.

Assessment Metric for Citations:

$$CI = 35 \times (CC/F) / (CC/F)$$
*

Here,

(CC/F)* is the maximum value of (CC/F) in the consideration set.

$$(CC/F) = CC / F$$

Here,

CC: Total Citations Count of publications of current full time faculty over their entire tenure, and

F is the number of regular faculty members as used in Item 1.

CC is computed as follows

$$CC = 0.3CCW + 0.6CCS + 0.1CCG$$

Here,

CCW: Total Number of Citations reported in Web of Science

CCS: Total Number of Citations reported in Scopus

CCG: Total Number of Citations reported in Google Scholar

2.c Percentage of Collaborative Publications (CP) - 10 Marks

Assessment Metric for Collaborative Publications:

 $CP = 10 \times (Fraction of publications jointly with outside collaborators)$

Data Collection:

Here, only those publications that appear in journals listed in FT-45, or reported in Scopus and Google Scholar would be considered. Could be aided by information from the institutions.

2.d Footprint of Executive Education and Professional Practice (FEPP) - 20 Marks

FEPP = REE + FPC

Proposed Marks distribution:

Revenues from Executive Education (REE) : 10 Marks,

Professional Consultancy (FPC) : 10 Marks

Institutions will be asked to provide information in a tabular form indicating funding agency, amount, duration, Principle Investigator and impact, if any.

Assessment Metric for Revenues from Executive Education:

REE = $10.0 \times (EE/EE^*)$

Here,

EE* is the maximum value of EE in the consideration set.

EE = (Average annual revenues from executive education during Last 3 years) / F

Here,

F denotes the total number of Full-Time Faculty

Assessment Metric for Professional Consultancy:

 $FPC = 10 \times (CF/CF^*)$

Here,

CF*: Maximum value of CF in the consideration set.

CF: (Average annual consultancy amount at institute level, for the previous 3 years)/F

Here,

F denotes the total number of Full-Time faculty.

Graduation Outcome (GO)

Graduation Outcome (GO) -100 Marks

Ranking Weight: 0.15

Overall Assessment Metric:

$$GO = (PHE + MS)$$

The component metrics are explained on the following pages.

3.a Combined Percentage for Placement, Higher Studies and Entrepreneurship (PHE): 70 Marks

Institute wise composite score will be calculated considering percentage of students placed in jobs, higher education and entrepreneurship. Institutions will be asked to maintain verifiable documentary evidence for each of the categories of placement, for verification, if needed.

Entrepreneurship in Management will be considered on the basis of a list of successful entrepreneurs amongst its alumni over the previous ten years. Again, documentary evidence with full details needs to be maintained for verification, where needed.

Assessment Metric:

PHE =
$$60 \times (N_1/100) + 10P_2$$

- N_1 = Percentage of students placed through campus placement, within one month of the end of the calendar year.
- P₂ = (The number of entrepreneurs produced over the previous 10 year period)/(The number of graduated students over the previous 10 year period).

3.b Mean Salary for Employment (MS): 30 Marks

Institutions will be asked to submit and maintain information regarding average salary and highest salary.

The information will be evaluated relatively on a normalization basis separately for Category A and Category B institutions.

$$MS = 30 \times AS/AS^* \times PP/PP^*$$

Here,

AS* - The largest values of AS in the consideration set

PP* - The largest values of PP in the consideration set

Here,

AS - Average Starting Salary of the graduating batch

PP - Percentage of the graduating class that were placed through Campus, within one month of graduation.

Outreach and Inclusivity (OI)

Outreach and Inclusivity (OI) - 100 Marks

Ranking Weight: 0.15

Overall Assessment Metric:

$$OI = (OF+RD+WS+ESDS+PCS)$$

The component metrics are explained on the following pages.

4.a Outreach Footprint [Continuing Education, Service] (OF) – 20 Marks

Information to be sought from institutions regarding:

- Names and number of CEP courses organized with participation numbers;
- Teacher Training and related outreach activities;
- Participation in Technology enhanced programs like NPTEL, Virtual Labs or related activities like TEQIP etc.
- Interactions with industry.
- Facilitation of faculty in quality improvement.
- Any other activities falling in this category.

Assessment Metric:

$$OF = CES + MOOCs$$

$$CES = 10 \times (N/N^*)$$

Here,

N* is the maximum value of N in the consideration set

$$MOOCs = 10 \times (M/M*)$$

Here,

M* is the maximum value of N in the consideration set

N: Total number of participant days/number of full time faculty

M: Total number of MOOCs certificates given in a year/ number of full time faculty

4.b Percent Students from other States/Countries - Region Diversity (RD): 20 Marks

Assessment Metric:

RD = 10 × Percentile fraction of total students admitted (averaged over past 3 years) from other states + 10 × Percentile fraction of students admitted (averaged over past 3 years) from other countries.

4.c Percentage of Women Students and Faculty (WS) – 30 Marks

WS =
$$12 \times (N_1/50) + 12 \times (N_2/20) + 6 \times (N_3/2)$$

Here,

N₁, N₂ and N₃ are the percentage of women students, faculty and members of the governing board, respectively.

Benchmarks:

50% women students and 20% women faculty and 2 women as Institute Head or in the Governing Board expected to score maximum marks; linearly proportionate otherwise.

4.d Percentage of Economically and Socially Disadvantage Students (ESDS) - 20 Marks

$$ESDS = 20 \times (N/50)$$

Here,

N is the percentage of economically and socially disadvantaged students averaged over the previous 3 years.

Benchmarks:

50% economically and socially disadvantaged students should be admitted to score maximum marks.

4.e Facilities for Physically Challenged Students (PCS) - 10 Marks

PCS = 10 Marks

If the Institute provides full facilities for physically challenged students. NAAC and NBA to provide their assessment as possible.

Perception (PR)

Perception (PR) - 100 Marks

Ranking Weight: 0.1

Overall Assessment Metric:

P = PR

The component metrics are explained on the following pages.

5.a Process for Peer Rating in Category (PR): 100 Marks

This is to be done through a survey conducted over a large category of academics, Institution heads, HR head of employers, members of funding agencies in Government, Private sector, NGOs, etc.

Lists may be obtained from institutions and a comprehensive list may be prepared taking into account various sectors, regions, etc.

Lists to be rotated periodically.

This will be an On-line survey carried out in a time-bound fashion.

Part - II
Parameters and Metrics
for
Category 'B' Institutions

Overview: Category 'B' Institutions

Summary of Ranking Parameters Finalized by MHRD

Sr. No.	Parameter	Marks	Weightage
1	Teaching, Learning & Resources (TLR)	100	0.30
2	Research, Professional Practice & Collaborative Performance (RPC)	100	0.20
3	Graduation Outcome (GO)	100	0.25
4	Outreach and Inclusivity (OI)	100	0.15
5	Perception (PR)	100	0.10

Cumulative Sheet

Sr. No.	Parameter	Weightage/Marks
1	Teaching, Learning and Resources (TLR)	Ranking Weightage = 0.30
	A. Faculty Student Ratio with Emphasis on Permanent Faculty	30 Marks
	B. Combined Metric for Faculty with Ph.D and Experience	30 Marks
	C. Metric for Library Facilities	15 Marks
	D. Metric for Sports and Extra Curricular Facilities, Activities	10 Marks
	E. Metric for Teaching and Innovation	15 Marks
2	Research, Professional Practice & Collaborative Performance (RPC)	Ranking Weightage = 0.20
	A. Combined Metric for Publication	35 Marks
	B. Combined Metric for Citations	35 Marks
	C. Percentage of Collaborative Publications	10 Marks
	D. Footprint of Executive Education and Professional Practice	20 Marks
3	Graduation Outcome(GO)	Ranking Weightage = 0.25
	A. Combined Percentage for Placement, Higher Studies and Entrepreneurship	70 Marks
	B. Mean Salary for Employment	30 Marks
4	Outreach and Inclusivity (OI)	Ranking Weightage = 0.15
	A. Outreach Footprint (Continuing Education, Service)	20 Marks
	B. Percentage of Students from Other States/ Countries-Region Diversity	20 Marks
	C. Percentage of Women Students and Faculty	30 Marks
	D. Percentage of Economically and Socially Disadvantage Students	20 Marks
	E. Facilities for Physically Challenged Students	10 Marks
5	Perception(PR)	Ranking Weightage = 0.10
	Process for Peer Rating in Category	100 Marks

1

Teaching, Learning & Resources (TLR)

Teaching, Learning & Resources (TLR) - 100 Marks

Ranking Weight: 0.30

Overall Assessment Metric:

$$TLR = (FSR + FQE + LI + SEC + TI)$$

The component metrics are explained on the following pages.

1.a Faculty-Student Ratio with Emphasis on Permanent Faculty (FSR): 30 Marks

Assessment will be based on the ratio of number of regular faculty members in the Institute and total sanctioned/approved intake considering all full-time Programs.

Regular appointment means faculty on a full time basis with no time limit on their employment. However, full-time faculty on contract basis for a period of not less than three (3) years, on gross salary similar to those who are permanent can also be included.

Only faculty members with Ph.D and MBA qualifications should be counted here.

Visiting faculty (with a Ph.D) who are visiting the institution on a full time basis for at least one semester can be included in the count for that semester as explained below.

Assessment metric will be the same for Category A and Category B Institutions.

$$FSR = 30 \times Min[10 \times F/N), 1]$$

Here,

N: Total number of students studying in the institution considering all PG Programs, excluding the Ph.D program.

$$F = F_1 + 0.3F_2$$

F₁: Full time regular faculty of all PG Programs in the previous year.

F₂: Eminent faculty (with Ph.D) visiting the institution for at least one year on a full time basis can be counted (with a count of 0.5 for each such visiting faculty for a semester) in the previous year.

Benchmark ratio is 1:10 to score maximum marks.

For F/N < 1: 50, FSR will be set to zero.

Data Collection:

From the concerned Institutions in prescribed format on an On-line facility. As mentioned in the preamble, an institution will be eligible for ranking, if all relevant and updated data about the faculty members (in the previous three years) is available on a publicly visible website. The data will be archived and also duplicated by the Ranking Agency.

Data Verification:

By the Ranking Agency on a Random Sample Basis.

1.b Combined Metric for Faculty with Ph.D and Experience (FQE) - 30 Marks

It is proposed to give equal weightage (15 marks each) to both qualifications and experience.

Doctoral Qualification:

This will be measured on the basis of percentage of faculty with Ph.D in Engineering and Technology, Science, Mathematics or Humanities, as relevant to the concerned departments. The expected percentages would be different for Category A and Category B Institutions to account for ground realities.

Assessment Metric for Category B Institutions on Ph.D Qualification:

$$FQ = 15 \times (F/30)$$
, for $F \le 95\%$;

$$FQ = 15$$
, for $F > 30\%$.

Here F is the percentage of Faculty with Ph.D. averaged over the previous 3 years.

(Implies that the expected percentage is a minimum of 95% to score maximum score, decreasing proportionately otherwise).

Experience Metric:

Experience should be assessed based on Average regular and relevant experience of the faculty members (from first relevant employment to the present employment). Relevance here means experience in the subject area being taught by the faculty member.

More specifically,

$$E = \frac{\sum E_i}{F}$$

Here,

E, denotes the experience of the i'th faculty member.

A Methodology for Ranking of Engineering Institutions in India

To simplify, E_i will be calculated from the age profile of the faculty members as follows:

$$E_i = A_i - 30$$
, for $A_i \le 45$ years.

$$E_{i} = 15$$
, for $A_{i} > 45$ years.

Assessment Metric for Experience:

$$FE = 15 \times (E/15)$$
, for $E \le 15$ years;

$$FE = 15$$
, for $E > 15$ years.

Here,

E is the average years of experience of all faculty members as calculated above.

This implies that the benchmark average experience is to be fifteen (15) years to score maximum marks, decreasing proportionately otherwise.

Data Collection:

Institutions to submit information in a tabular form indicating faculty name, age, qualifications (indicating the University attended for the qualifying degree) and experience under the categories academic and industrial. Updated data for the last three(3) years should be available on a publicly available website, and suitably archived for consistency check in subsequent years.

Data Verification:

On a random sampling basis.

Combined Metric for Faculty Qualifications and Experience:

$$FQE = (FQ + FE)$$

1.c Metric for Library Facilities - 15 Marks

Library:

LI = 15 × (Percentile parameter on the basis of annual expenditure (EXLI) on library resources per student)

EXLI = EXLIPS + EXLIES

EXLIPS = EXLIP/N

 $EXLIES = 2 \times EXLIE/N$

EXLIP: Actual Annual Expenditure on Physical Resources, Books, Journals, etc.

EXLIE: Actual Annual Expenditure on Electronic Resources, Books, Journals etc.

If this expenditure is below a threshold value to be determined separately for each category of institutions, EXLI = 0.

1.d Metric for Sports and Extra-Curricular Facilities, Activities (SEC) - 10 Marks

Extra-Curricular (EC) activities may typically include, but not limited to Clubs, Forums, NCC, NSS etc.

Parameters to be used:

- Sports facilities area per student (A);
- Actual expenditure per student on Sports and EC activities (B) and
- Number of top positions in inter-college event (C).

Each parameter to be evaluated on a percentile basis to obtain the percentile parameter p(A), p(B) and p(C). Weights assigned to the 3 components are 0.5, 0.25 and 0.25, respectively.

SEC =
$$10 \times [p(A)/2 + p(B)/4 + p(C)/4]$$
.

Data Collection:

To be obtained from the institutions.

Data Verification:

By Ranking Agency on a random sample basis.

1.e Metric for Teaching and Innovation (TI) - 15 Marks

Introduction of Massive Open Online Courses (MOOCs) and Cases provide valuable supplementary tools for enhancing the learning experience of the students.

This component captures teaching innovation (TI) through distant learning modes such as MOOCs and teaching cases for management schools. Introduction of MOOCs provides valuable supplementary tool for enhancing the learning experience of the students. Teaching cases are an essential part of management teaching.

$$TI = MOOCs(10) + Cases(5)$$

Here,

M = Number of MOOCs offered in the current year/number of faculty MOOCs = 10 X (M/M*),

Here,

M* is the maximum value of M

C = Number of Teaching Cases published in a year/Number of faculty (Only cases published in HBS and IVEY portals are considered)

Cases =
$$5 \times (C/C^*)$$
,

Here,

C* is the maximum value of C

$$TI = (MOOCs + Cases)$$

2

Research, Professional Practice & Collaborative Performance (RPC)

Research, Professional Practice & Collaborative

Performance (RPC) - 100 Marks

Ranking Weight: 0.20

Overall Assessment Metric:

$$RPC = (PU + CI + CP + FEPP)$$

The component metrics are explained on the following pages.

2.a Combined Metric for Publications (PU)- 35 Marks

It is proposed that publications in journals listed in FT-45, Scopus and Google Scholar only will be counted for assessment. An average value P for the previous three(3) years will be computed as detailed later in this item.

The Institution will submit faculty publication list as supporting information.

Assessment Metric for Publications:

$$PU = 35 \times PF/PF^*$$

Here,

PF* is the maximum value of **PF** in the consideration set.

$$PF = (P/F)$$

Here,

P: Total number of publications = Average of number of publications appearing in journals over the previous 3 years.

$$P = 0.3PFT45 + 0.6PS + 0.1PG$$

Here,

PFT45: Number of publications reported in FT-45

PS: Number of publications reported in Scopus

PG: Number of publications reported in Google Scholar

F is the number of regular faculty members as used in Item 1.

2.b Metric for Citations (CI) - 35 Marks

The proposed assessment is based on the ratio of the total number of citations of publications of current full-time faculty over their entire tenure to the number of full-time faculty. For all such publications, an average of the numbers from the three popular Databases will be used.

Institutions will be asked to provide information in a tabular form giving relevant details. However, the primary sources will be the three standard data bases Scopus, Web of Science and Google Scholar.

Assessment Metric for Citations:

$$CI = 35 \times (CC/F) / (CC/F)$$
*

Here,

(CC/F)* is the maximum value of (CC/F) in the consideration set.

$$(CC/F) = CC / F$$

Here,

CC: Total Citation Counts of publications of current full time faculty over their entire tenure, and

F: Total number of regular faculty members as used in Item 1.

CC is computed as follows

$$CC = 0.3CCW + 0.6CCS + 0.1CCG$$

Here,

CCW: Total Number of Citations reported in Web of Science

CCS: Total Number of Citations reported in Scopus

CCG: Total Number of Citations reported in Google Scholar

2.c Percentage of Collaborative Publications (CP) - 10 Marks

Assessment Metric for Collaborative Publication:

 $CP = 10 \times (Fraction of publications jointly with outside collaborators)$

Data Collection:

Here, only those publications that appear in journals listed in FT-45, or reported in Scopus and Google Scholar would be considered. Could be aided by information from the institute.

2.d Footprint of Executive Education and Professional Practice (FEPP) - 20 Marks

FEPP = REE + FPC

Proposed distribution:

Revenues from Executive Education (REE) : 10 Marks,

Professional Consultancy (FPC) : 10 Marks

Institution will be asked to provide information in a tabular form indicating funding agency, amount, duration, Principle Investigator and impact, if any.

Assessment Metric for Revenues from Executive Education

 $REE = 10.0 \times (EE/EE*)$

Here,

EE* is the maximum value of EE in the consideration set.

EE = (Average annual revenues from executive education during Last 3 years)/F

Here,

F denotes the total number of Full-Time Faculty

Assessment Metric for Professional Consultancy:

 $FPC = 10 \times (CF/CF^*)$

Here,

CF* is the maximum value of CF in the consideration set.

CF = (Average annual consultancy amount at institute level for the previous 3 years)/F

Here,

F denotes the total number of Full-Time faculty.

Graduation Outcome (GO)

Graduation Outcome (GO) - 100 Marks

Ranking Weight: 0.25

Overall Assessment Metric:

$$GO = (PHE + MS)$$

The component metrics are explained on the following pages.

3.a Combined Percentage for Placement, Higher Studies and Entrepreneurship (PHE): 70 Marks

Institute wise composite score will be calculated considering percentage of students placed in jobs, higher education and entrepreneurship. Institutions will be asked to maintain verifiable documentary evidence for each of the categories of placement, for verification if needed. This should be applicable to only those programs that have placements.

Entrepreneurship in Management will be considered on the basis of a list of successful entrepreneurs amongst its alumni over the previous ten years. Again, documentary evidence with full details needs to be maintained for verification, where ever needed.

Assessment Metric:

PHE =
$$60 \times (N_1/100) + 10P_1$$

Here,

- N_1 = Percentage of students placed through campus placement within one month after the end of calendar year.
- P₂ = (The number of entrepreneurs produced over the previous 10 year period)/(The number of graduated students over the previous 10 year period)

3.b Mean Salary for Employment (MS): 30 Marks

Institutions will be asked to submit and maintain information regarding Average salary and Highest salary.

The information will be evaluated relatively on percentile basis separately for Category A and Category B institutions.

$$MS = 30 \times AS/AS^* \times PP/PP^*$$

Here,

AS* - The largest values of AS in the consideration set

PP* - The largest values of PP in the consideration set

Here,

AS = Average Starting Salary of the graduating batch

PP = Percentage of the graduating class that were placed within one month of graduation.



Outreach and Inclusivity (OI)

Outreach and Inclusivity (OI) - 100 Marks

Ranking Weight: 0.15

Overall Assessment Metric:

$$OI = (OF+RD+WS+ESDS+PCS)$$

The component metrics are explained on the following pages.

4.a Outreach Footprint (Continuing Education, Service) (OF) – 20 Marks

Information to be sought from institutions regarding:

- Names and number of CEP courses organized with participation numbers.
- Teacher Training and related outreach activities.
- Participation in Technology enhanced programs like NPTEL, Virtual Labs or related activities like TEQIP etc.
- Interactions with industry.
- Facilitation of faculty in quality improvement.
- Any other activities falling in this category.

Assessment Metric

$$OF = CES + MOOCs$$

$$CES = 10 \times (N/N^*)$$

Here,

N* is the maximum value of N in the consideration set

$$MOOCs = 10 \times (M/M*)$$

Here,

M* is the maximum value of M in the consideration set

N: Total number of participant days/number of Full time faculty

M: Total number of MOOC certificates given in a year/ number of Full time faculty

4.b Percentage of Students from other States/ Countries - Region Diversity (RD): 20 Marks

Assessment Metric:

RD = 10 × Fraction of total students admitted (averaged over past 3 years) from other states + 10 × Fraction of students admitted (averaged over past 3 years) from other countries.

4.c Percentage of Women Students and Faculty (WS) - 30 Marks

WS =
$$12 \times (N_1/50) + 12 \times (N_2/20) + 6 \times (N_3/2)$$

Here,

N₁, N₂ and N₃ are the percentage of women students, Faculty and members of the governing board, respectively.

Benchmark:

50% women students and 20% women faculty and 2 women as Institute Head or in the Governing Board expected to score maximum marks; linearly proportionate otherwise.

4.d Percentage of Economically and Socially Disadvantaged Students (ESDS) – 20 Marks

$$ESDS = 20 \times (N/50)$$

N is the percentage of economically and socially disadvantaged students averaged over the previous 3 years.

Benchmark:

50% economically and socially disadvantaged students should be admitted to score maximum marks.

4.e Facilities for Physically Challenged Students (PCS) - 10 Marks

PCS = 10 Marks,

If the Institute provides full facilities for physically challenged students.

NAAC and NBA to provide assessment as possible.

Perception (PR)

Perception (PR) - 100 Marks

Ranking Weight: 0.10

Overall Assessment Metric:

P = PR

The process is explained on the following pages.

5.a Process for Peer Rating in Category (PR): 100 Marks

- This is to be done through a survey conducted over a large category of academics, Institution heads, HR heads of employers, members of funding agencies in Government, Private sector, NGOs, etc.
- Lists may be obtained from institutions and a comprehensive list may prepared taking into account various sectors, regions, etc.
- Lists to be rotated periodically.
- This will be an On-line survey carried out in a time-bound fashion.
- For Category B institutions, the lists will have a significant number from state level academics who are knowledgeable about the institutions in the state.