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## Role of Accreditation and Ranking in Academic Institution Development

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### Abstract

The accreditations and rankings like NBA, NAAC, and NIRF play a crucial role in educational institutions to know and push the institutions to meet and maintain the outcome-based education standards by ensuring compliance reports of accreditation bodies and ranking institutions. The rankings and accreditations not only help in the development of academic institutions. But also help the stakeholder in choosing the good institution among IITs, NITs, IIITs, central universities, state universities, autonomous and non-autonomous institutions with the help of their accreditation scores and rankings.

**KEYWORDS:** Accreditation, Outcome-based education, NBA (National Board of Accreditation), NAAC (National Assessment and Accreditation Council), NIRF (National Institutional Ranking Framework)

### 1. Introduction

Indian higher education system is one of the best education systems in the world and it's well-known that India was the hub for quality education. This is possible due to maintaining outcome-based education standards in higher educational institutions. Quality education plays an important role in creating many jobs, thereby helping economically underprivileged groups uplift.

Nowadays, most of us have smartphones through which we can access the institution's details from every nook and corner of the country. The accreditations and rankings bodies like NBA, NAAC, and NIRF rank/rate the institutions based on the specific parameters which will play important roles in student's life and institution growth.

**Classification of Accreditations and Rankings:** The accreditations and Rankings are classified into two categories: 1. Institutional Level Rankings and Accreditations 2. Department level Accreditations

Some of the parameters taken into consideration for ranking the academic institutions by the ranking bodies are as follows:

#### 1. National Board of Accreditation (NBA)

**Vision Mission and Program Educational Objectives:** A systematic procedure should be followed for defining vision, mission, and program educational objectives and should be disseminated among the stakeholders.

**Program Curriculum and Teaching-Learning Process:** It is based on the curriculum structure and development and the process followed to improve the quality of teaching and learning. The student's performance is evaluated through internal and external theory & labs, projects, and internships through which PEO attainment is calculated for refining curriculum and improving the quality of teaching and learning based on the attainment.

**Course outcomes and Program-outcomes:** Course outcomes are achieved through core-course and contribute to the overall attainment of program outcomes. The competencies and expertise of graduated students will be measured through program outcomes.

**Students Performance:** It is based on the enrolment ratio, success rate of the students in the stipulated time, academic performance, placement and, higher studies, etc.

**Faculty Information and Contributions:** The faculty qualifications, experience, student-faculty ratio, faculty retention, faculty innovation in teaching-learning, research & development plays an important role.

**Facilities and Technical Support:** In any educational institutions laboratories, laboratories maintenance, technical manpower and safety measures followed in the laboratories are important.

**Continuous Improvement:** To improve academics continues academic audit need to take place thereby improving the entrepreneurship, academic, placements and higher studies.

**First Year Academics:** The attainment of course-outcomes and program-outcomes through the first year common courses and first year faculty-student ratio and their qualifications.

**Students Support System:** Student support system is a facility to make students learning process easier and interesting for the learner.

**Governance, Institutional Support, and Financial Resources:** The governance and transparency, budget program specific and institutional, budget allocation and their utilization plays a key role in the institutional development.

## 2. National Assessment and Accreditation Council (NAAC)

### Curriculum

### Aspects:

Includes curriculum design & development, curriculum planning and implementation, academic flexibility, curriculum enrichment and feedback system.

**Teaching-Learning and Evaluation:** Students enrolment and profile, student's diversity, teaching-learning process, faculty profile and quality, students process and reforms, students' performance and learning outcomes and student satisfaction.

**Research, Innovation, and Extension:** Promotion of research and facilities, research resource mobilization, innovation ecosystem, research publication and awards, consultancy, extension activities and collaborations.

**Infrastructure and Learning Resources:** Physical facilities, library as learning resources, IT infrastructure and maintenance of campus infrastructure.

**Students Support and Progression:** student support, progression, alumni engagement and student participation activities.

### Governance, Leadership,

**and Management:** Institutional Vision and Leadership, strategy development and deployment, faculty empowerment, financial management & resource mobilization and internal quality assurance.

**Institutional Values and Best Practices:** Institutional values and social responsibilities, best practices, and institutional distinctiveness.

3. NationalInstitutionalRankingFramework(NIRF)

**Teaching-Learning and Resources:** Students strength including doctoral students, Faculty studentratio,facultywithPhDsandexperience,financialresourcesandtheirutilization.

**ResearchandProfessionalPractice:**Publications,qualitypublicationsIPR&patents–publishedandgranted,footprint ofprojectsandprofessionalpractice

**GraduationOutcomes:**Itfocuses onthe, universityexaminationresults,placementsand higherstudies,mediansalaryofplacedstudentsandnoofPhDstudentsgraduated.

**OutreachandInclusivity:**RegionDiversity,womendiversitybothstudentsandfaculty,supportto economically/Socially challenged students and facilities provided for physically challengedstudents

**Perception:**Itsbasicallyfromtheemployeesandacademicpeers.

Based on the above par meters/criteria’s the institutions are evaluated and ranked/accredited theinstitutions/departments.

TheanalysisisdonebyconsideringtheNIRF2022rankingsoftop10institutionsisasfollows.

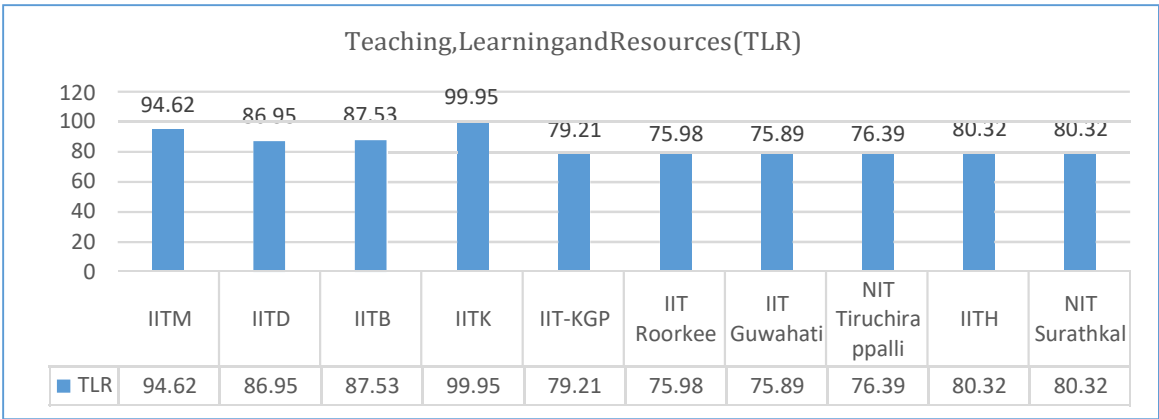


Figure1a)Teaching, Learning and Resources(TLR)

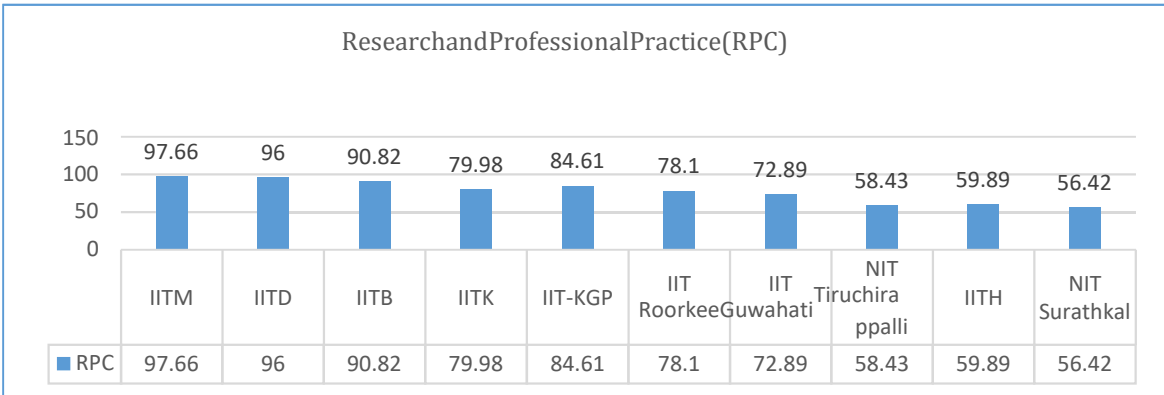


Figure1b)Research and Professional Practice(RPC)

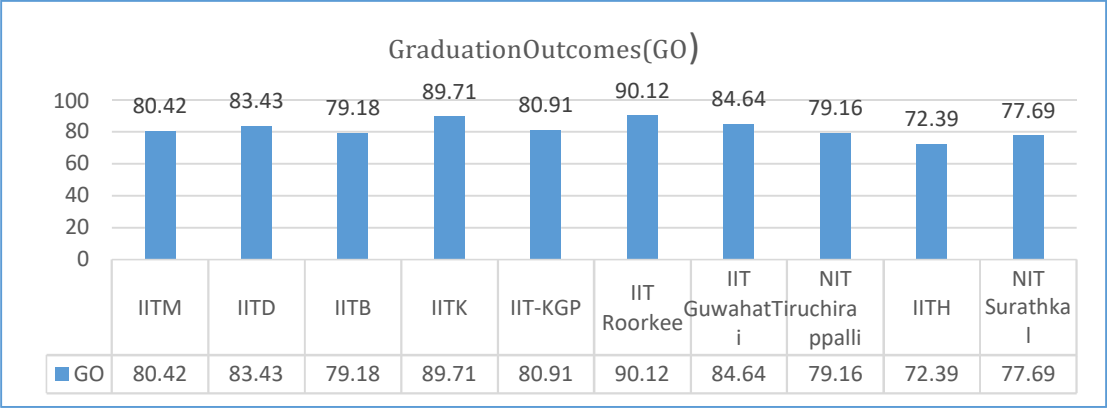


Figure c)Graduation Outcomes(GO)

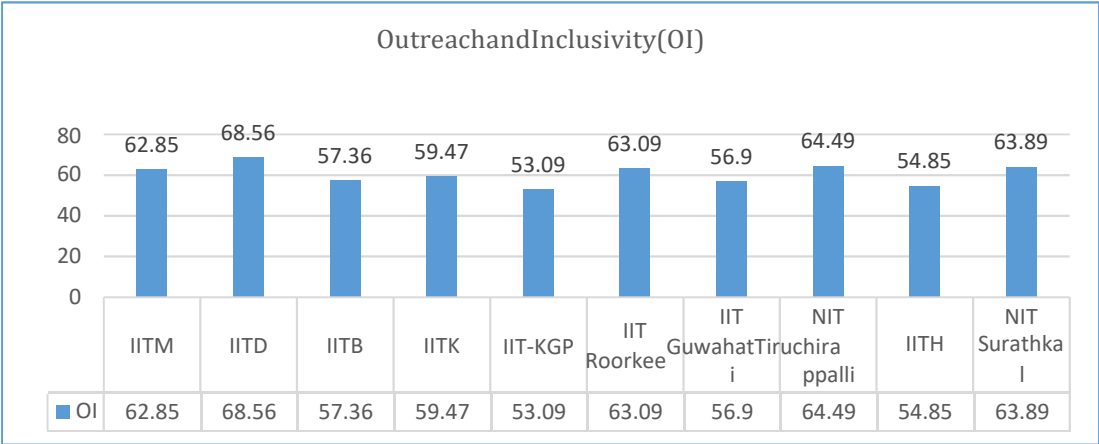


Figure1d)OutreachandInclusivity(OI)

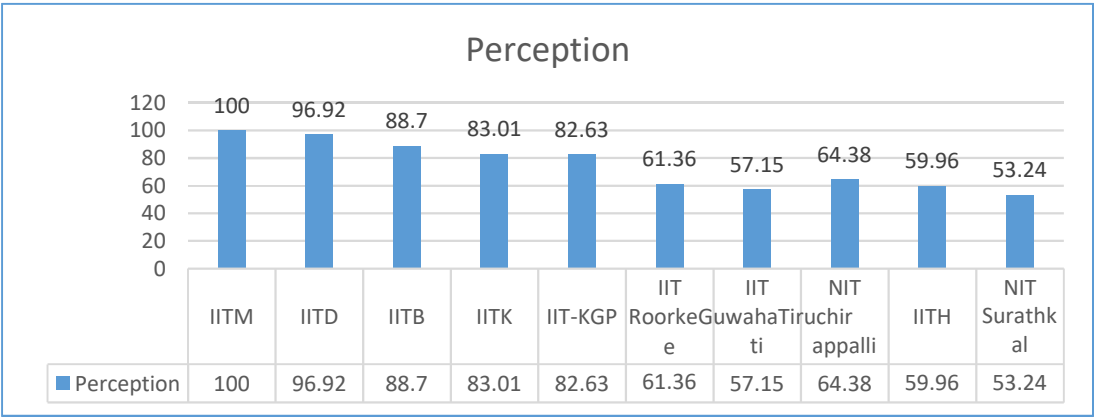


Figure1e)Perception

4. Analysis of NIRF Rankings

The ranking analysis helps the institute to know how the institution is performing in the core areas like 1. Teaching, Learning and Resources (TLR) 2. Research and Professional Practice (RP) 3. Graduation Outcomes (GO) 4. Outreach and Inclusivity (OI) 5. Perception. Based on the rank of National Institutional Ranking Framework (NIRF), the institute can plan and improve in the areas in which it needs to be improved.

As per NIRF 2022 ranking the top 10 institutions are 1. IITM 2. IITD 3. IITB 4. IITK 5. IITKGP 6. IIT Roorkee 7. IIT Guwahati 8. NIT Tiruchirappalli 9. IITH and 10. NIT Surathkal. However, no institution is retained their position in all five parameters. The strengths of the institution are clearly shown in figure 1a – figure 1e in terms of TLR, RPC, GO, OI and Perception. It is clearly indicating that the strength of each institution varying as shown in figure 1a – figure 1e. It's also observed that the TLR, RPC, GO, OI and Perception scores changing year by year. However, few institutions are retaining their ranks in the same positions. Likewise, the NBA and NAAC is also evaluates the institutions based on the parameters/criteria's of NBA and NAAC respectively. The NBA and NAAC peer team will visit the institutions and evaluate the institutions based on the data submitted. During their visit to the institution the peer team will identify and prepare a report on the strengths and weakness of the institution, and end of their visit the report will be handed over to the head of the institution which will help the institution to develop upon.

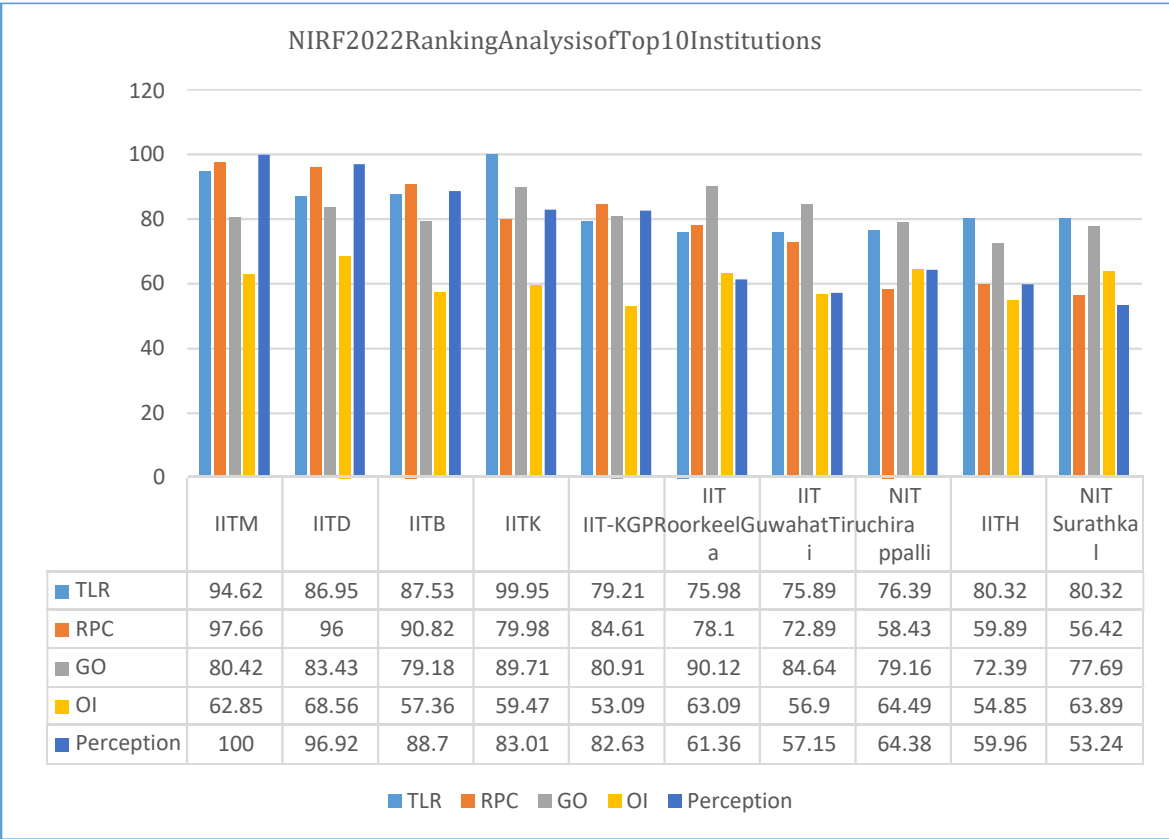


Figure 2) NIRF 2022 Ranking Analysis of Top 10 Institutions

## 5. Conclusion

In National Institutional Ranking Framework (NIRF) there are five parameters i. e TLP, RPC, GO,OI and perception. Each parameter is evaluated for 100 marks and each parameter is given weightage like TLP = 0.3, RPC = 0.3, GO = 0.2, OI = 0.1. Based on the some of the scores of these five parameters ranks are allocated. It observed that an institution need not to score top in all parameters. Because the ranks are allocated based on some of all five parameters. However, it is equally important to score reasonably good in all parameters to be one of the top institutions. More importantly in TLP, RPC and GO need to be performed extremely good to be in the top institutions.

## References

1. "Vasudevan N, Sudalai Muthu T", Development of a common Framework for Outcome Based Accreditation and Rankings. ScienceDirect Proceedia Computer Science 172(2020)270-276.2020.
2. <https://www.nirfindia.org/2022/EngineeringRanking.html>.
3. [https://www.nbaind.org/files/NBA\\_UGEngg\\_Tier\\_I\\_Manual.pdf](https://www.nbaind.org/files/NBA_UGEngg_Tier_I_Manual.pdf)
4. <http://naac.gov.in/index.php/en/resources/publications/manuals>
5. G.K Viswanadhan, "Subjective Judgements and overall perception dominate the accreditation process – A case study from India" Asian Social Science, Vol.4, No.8, 2008.