

EXECUTIVE SUMMARY

In 2002, believing in and acknowledging the potential as proven by the success of their alumni and their contributions in the field of technical education, seventeen Regional Engineering Colleges (RECs) were upgraded to National Institute of Technology (NITs) and were given the status of institutes of national importance and deemed university by the Government of India (GoI). Later on in 2004 to 2006 three more colleges were also issued NIT status, thus increasing their number to twenty. Subsequently based on the request of state governments and feasibility, ten new NITs were either converted from existing institutes or freshly created in 2010 and one more NIT in 2015 were setup. Hence till date the country has a total of 31 NITs. Today, with more than 10 years having passed and significant funding been provided by the GoI to these institutes, there has till date not been a systematic study assessing the contributions made by the NITs, especially in terms of research and consultancy activities. Hence there is a need to have an extensive study and assessment on the research and consultancy activities of these institutes.

In view of this need, the objectives of the present investigation are as follows:

- To make an analysis and assessment of academic performance of the faculty and students of NITs of India.
- To group existing NITs based on similar academic, research and consultancy performance.
- To identify core competence of each NIT for the benefit of academic community and industries.

The methodology employed for achieving the above laid objectives is as follows:

- Designing and preparation of questionnaire, in terms of both its content and format
- Collection of relevant data from different NITs as per the questionnaire
- Computation of the mean score of the NITs under each head/category
- Analysis and comparison of performance of each NIT under each head/category
- Cluster analysis using performance parameters and interpretation of various results

Conclusion on the situation and proposed suggestions:

Based on academic, research and consultancy performance of the existing NITs, they are grouped into four clusters. The NITs belonging to first two groups, which comprise of 4 NITs in the first group and 7 in the second and hence a total of 11 in the two groups, are performing reasonably well on all academic fronts. However, the NITs in the remaining two clusters need substantial improvement in strengthening their laboratory infrastructure as well as increasing the number of quality faculty members so that the R&D output increases further. Particularly, the

last group consists of new NITs which as of now lack in all the above parameters of infrastructure and the quality and number of senior faculty. One also needs to take into consideration the fact that even some of the older NITs have poor R&D performance which needs to be strengthened by identifying and thereafter removing the issues surfacing from the above report.

In addition, core competence of each NIT has been evaluated. It is observed that NIT Rourkela has the maximum, i.e. 6, core competence areas whereas many NITs are having only one. All the ten new NITs do not have proven core competence in any area which is understandable since they are new and yet to develop sophisticated laboratories, research facilities and produce quality publications.

The MHRD, GoI should therefore consider the suggestions, recommendations made in the conclusion chapter and adopt them as a policy so that all the NITs are able to justify themselves as “Institutes of National Importance”. The number and quality of faculty members in many NITs is a matter of concern. It is also suggested that the available laboratories, resources and expensive or state-of-the-art software at different NITs should be made available to other NITs and Government institutes for use by their faculty and students, thereby promoting collaborative research. In the present scenario, such resource sharing is not happening properly which is leading to underutilization of R&D equipment. The interaction with industries needs substantial improvement for the betterment of both the industries and NITs. Greater emphasis should be given in the course curriculum of NITs to encourage entrepreneurship and launching of startups. This is again one aspect where the NITs have fared poorly. We are hopeful that if these issues are addressed in form of new policies and guidelines, the academic standing of the NIT system will substantially enhance.