

ACCREDITATION IN ENGINEERING COLLEGES IN INDIA

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Abstract: Every college in the state will now have to dangle an A or a B++ or a C certificate to survive. Getting an accreditation from the National Assessment and Accreditation Council (NAAC) or the National Board of Accreditation (NBA) became mandatory for every college in the state with the government passed a resolution. The NAAC accredits traditional arts, science and commerce colleges and the NBA gives a quality certificate for professional institutes. Exactly 945 colleges in Maharashtra are accredited by NAAC. This paper gives the basic idea about higher education, objective of NBA and NAAC with the process of Accreditation.

Keywords: Accreditation, AICTE, NBA, NAAC, SSR, LOI

I. INTRODUCTION

Accreditation is the evaluation of an educational institution or program by an independent body of professionals. Accreditation helps ensure that regardless of the institution or department's mission, the academic offerings meet standards set by the accrediting body. Indian higher education system is the 3rd largest system in the world. Expansion of higher education sector is imperative. During the past two decades, education sector in India has seen phenomenal growth and development. The number of Institutions has multiplied exponentially, from the 30 odd colleges in 1950-51, to more than 20,000 odd colleges and from 20 universities to more than 500 universities awarding degrees, which include all types of Institutions, namely, central, state, private, govt. aided, deemed to be universities and Institutions of national importance. The challenge is to ensure its quality to the stakeholders along with the expansion. To meet this challenge, the issue of quality needs to be addressed, debated and taken forward in a systematic manner.

II. II .WHAT IS HIGHER EDUCATION

According to Ronald Barnett (1992) there are four predominant concepts of higher education:

i) Higher education as the production of qualified human resources. In this view, higher education is seen as a process in which the students are counted as "products" absorbed in the labour market. Thus, higher education becomes input to the growth and development of business and industry.

ii) Higher education as training for a research career. In this view, higher education is preparation for qualified scientists and researchers who would continuously develop the frontiers of knowledge. Quality within this viewpoint is more about research publications and transmission of the academic rigour to do quality research.

iii) Higher education as the efficient management of teaching provision. Many strongly believe that teaching is the core of educational institutions. Thus, higher education institutions focus on efficient management of teaching-learning provisions by improving the quality of teaching, enabling a higher completion rate among the students.

iv) Higher education as a matter of extending life chances. In this view, higher education is seen as an opportunity to participate in the development process of the individual through a flexible, continuing education mode.

Interestingly, all these four concepts of higher education are not exclusive; rather they are integrated and give an overall picture of what higher is in higher education. If we look at the activities of colleges and universities, we will realize that teaching, research and extension form the three main functions of higher education.

Role of Higher Education in the Society

Higher education is generally understood to cover teaching, research and extension. If we critically analyze the different concepts of higher education, we can list the various roles higher education plays in the society. Higher education is the source or feeder system in all walks of life and therefore supplies the much-needed human resources in management, planning, design, teaching and research. Scientific and technological advancement and economic growth of a country are as dependent on the higher education system as they are on the working class. Development of indigenous technology and capabilities in agriculture, food security and other industrial areas are possible because of our world-class higher education infrastructure. Higher education also provides opportunities for lifelong learning, allowing people to upgrade their knowledge and skills from time to time based on the societal needs.

III. NATIONAL BOARD OF ACCREDITATION.

The New Education Policy of 1986 recognized the need for a Statutory Body at the National level responsible for overseeing the growth and quality of Technical Education in the country. Accordingly, All India Council for Technical Education (AICTE) was established by an Act of Parliament in 1987. As a part of its programs and activities, AICTE set up National Board of Accreditation (NBA) in September 1994, in order to assess the qualitative competence of educational Institutions from Diploma level to Post-Graduate level in Engineering and Technology, Management, Pharmacy, Architecture and related disciplines. NBA conducts evaluation of programs of technical Institution on the basis of laid down norms. NBA in its present form has

come into existence as an autonomous body with effect from 7th January 2010, under the aegis of AICTE, with the objective of assurance of quality and relevance of education, especially in technical disciplines through the mechanism of accreditation of programs offered by the technical Institutions.

IV. OBJECTIVES OF NBA

The following are the broad objectives of NBA

- To periodically conduct evaluation of technical Institutions or Programs on the basis of guidelines, Norms and Standards specified by it.
- To develop quality conscious systems of technical education where excellence, relevance to market needs and participation by all stake holders are prime and major determinants.
- To dedicate for building a technical education system, as facilitators of human resources, that will match the national goals of growth by competence, contribution to economy through competitiveness and compatibility with societal development.
- To provide the quality benchmarks targeted at Global and National Stockpile of human capital in all fields of technical education.

In line with the above, NBA has the mandate to fulfill the following specific objective of assessing and accrediting the academic programs. Assessment and accreditation shall be based on various criteria. This may include but not limited to Institutional mission and objectives; Organization and governance; Infrastructural facilities; Quality of teaching and learning; Curriculum design and review; Support services (library, laboratory, instrumentation, computer facilities etc.); and any other aspect as decided by the General Council (G.C.) and/or Executive Committee (EC)

The main objectives of assessment and accreditation shall be to:

- a. Assess and grade the courses and programs offered by institutes/colleges their various units, faculty, departments etc.
- b. Stimulate the academic environment and quality of teaching and research in these Institutions;
- c. Contribution to the sphere of knowledge in its discipline;
- d. Motivate colleges and/or Institutions of technical and professional education for research, and adopt teaching practices that groom their students for the innovation and development of leadership qualities;
- e. Encourage innovations, self evaluation and accountability in higher education;
- f. Promote necessary changes, innovations and reforms in all aspects of the working of colleges/ Institutions of technical and professional education for the above purpose; and

V. ACCREDITATION IN INDIA

5.1 What is NAAC?

The National Assessment and Accreditation Council (NAAC) is an autonomous body established by the University Grants Commission (UGC) of India to assess and accredit institutions of higher education in the country. It is

an outcome of the recommendations of the National Policy in Education (1986) which laid special emphasis on upholding the quality of higher education in India. To address the issues of quality, the National Policy on Education (1986) and the Plan of Action (POA-1992) advocated the establishment of an independent national accreditation body. Consequently, the NAAC was established in 1994 with its headquarters at Bangalore. At present in India, accreditation is voluntary for Higher Education Institutions. Out of 612 Universities in the country, only 172 of them have been accredited by the National Assessment and Accreditation Council (NAAC). Out of the Universities accredited, 67 have been placed in Grade A, 99 Universities in Grade B and only 6 in Grade C, based on scores awarded during the process of accreditation.

5.2 Accreditation Criterion

The NBA works on a Two TIER accreditation, for Diploma, UG and PG Engineering Programs; TIER-I is meant for Autonomous Colleges and Universities and TIER-II is meant for Non-Autonomous Colleges; both TIER-I and TIER-II have the same nine criteria and the same total 1000 points, but have different weights or points for different criteria, as given in the Table below

TABLE I Accreditation Criterion

Sr.No	Accreditation Criterion	TIER-I	TIER-II
1	Vision, Mission and PEOs	100	75
2	Program Outcomes	225	150
3	Program Curriculum	125	125
4	Students' Performance	75	100
5	Faculty Contributions	175	175
6	Facilities & Tech. Support	75	125
7	Acad. Support Units & T/L Process	75	75
8	Governance, Institutional Support & Financial Resources	75	75
9	Continuous Improvement	75	100
Total		1000	1000

In TIER-I, outcome based parameters have more points and in TIER-II, output based parameters have more points. Under TIER-I, if a program scores 750 or above out of 1000 points, with a minimum of 60% in each of the nine criteria, it is given a full accreditation for 5 years. If the score lies between 600 and 750 (without any minimum requirement), then provisional accreditation is granted for 2 years. In TIER-II, if a program scores 750 or more out of 1000 points, with minimum 60% in six mandatory criteria (1 and 4 to 8), it is awarded a full 5 year accreditation. If it scores between 600 and 750 points, with minimum 60% in each of the six mandatory criteria (1 and 4 to 8), the program is accredited for 2 years

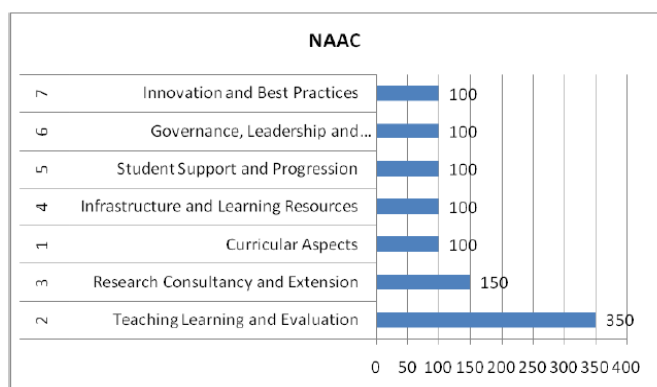


Figure 1 Seven Criteria's for NAAC accreditation with marks (arranged in ascending order)

Figure No 1 indicates the absolute marks of the various criteria have to secure NAAC accreditation. The largest criterion is the teaching learning process having 350 marks. Focus is given to academics to ensure good learning takes place. Research and Consultancy is offered the second place with 150 marks. Research, consultancy shall ensure better interaction with real world by the faculty so that they keep updating themselves to the requirements of external world. Rest five criteria's have been allocated 100 marks each and thus have equal weightage

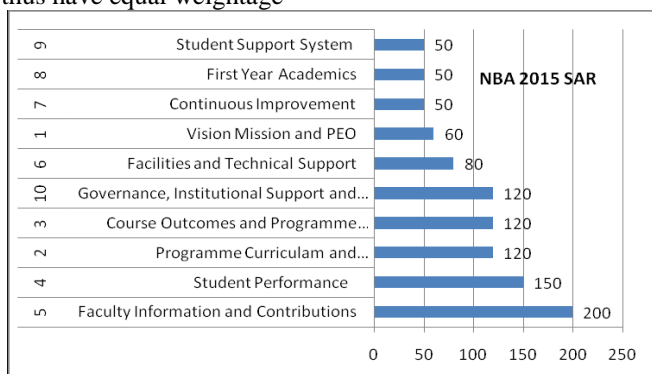


Figure 2 Ten Criteria's for NBA accreditation with marks (arranged in ascending order)

Figure No 2 indicates the absolute marks of the various criteria have to secure NBA accreditation. The largest criterion is the faculty information and contributions having 200 marks. Focus is given to faculty to ensure good qualifications and contributions of faculty takes place. This criterion does include Research, Publications, and Consultancy. Research, consultancy shall ensure better interaction with real world by the faculty so that they keep updating themselves to the requirements of external world. Student's performance is offered the second place with 150 marks. Here the performance of students in second year, third year and final year is considered.

Graduate Attributes

1. Engineering Knowledge (Application of Maths, Science and Engineering Fundamentals to Complex Engineering Problems)
2. Problem Analysis
3. Design and Development Accreditation Criterion TIER-I

TIER-II

4. Investigation of Complex Problems
5. Modern Tool Usage
6. Engineer and Society
7. Environment and Sustainability
8. Ethics
9. Individual and Team Work.
10. Communication
11. Lifelong Learning
12. Project Management and Finance.

In the present higher education scenario, it is hard to find these attributes in most of the engineering graduates. So, if programs of an institution are to be fully accredited and their graduates globally accepted, the institution should strive very hard to impart these G.A.s (Graduate Attributes). A rigorous training is required, beginning from the very first year; periodical training for faculty also is needed in subjects and in skills.

3.4A broad overview of the process of Accreditation

The process of accreditation by NAAC works in the following order; Preparation of Self-study Report (SSR), and uploading it on the institution website.

- On-line submission of the Letter of Intent (LOI).
- On-line submission of 'Institutional Eligibility for Quality Assessment' (IEQA) for applicable institutions.
- Submission of Hard Copies of SSR
- Peer team visit to the institution.
- Final decision by NAAC.

When an institution undergoes the accreditation process for the first time it is referred to as Cycle 1 and the consecutive five year periods as Cycle 2, 3, etc.

VI. CONCLUSION

Higher education is the backbone of any society. It is the quality of higher education that decides the quality of human resources in a country. Higher education, as we see today, is a complex system facilitating teaching, research, extension and international cooperation and understanding. The core values of NAAC for higher education system in India envisage: national development, fostering global competitiveness, including ethical values, promote use of technology and create an atmosphere and quest for excellence. Sixty per cent of colleges in India and 66 per cent of the universities are not within the UGC ambit and do not have accreditation. In the 14 years that NAAC has been at work, only 140 universities (of a total 415) and 3,492 colleges (of the 20,676) in the country have been rated

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