3. QUALITY MANAGEMENT MOVEMENT IN HIGHER EDUCATION

Dr. N.D. Junnarkar

Abstract

Higher education programs and the institutions for higher education in India are required to run the courses, degree programs and the overall education institution as per certain specified standards, prescribed by the government Agencies - NAAC under UGC and NBA under AICTE. The educational systems, operations and the processes are reviewed and monitored by NAAC and NBA. Indian higher education institutions are complying with the requirements of these quality assessment bodies. ISO is an International organization for standardization, which was mainly started for the manufacturing industries. Subsequently, it was extended to service industries and now extended to cater to all kinds of industry sectors including the education sector.

This article mainly deals with the objectives and aims of these three organizations and the procedure followed by them to certify the educational institutions/ colleges for quality. The parameters considered for the measurement of performance of the education program/institution are also given to elaborate the work procedure. Finally, differences are brought out and are given in a tabular to get the comparative view of these professional organizations.

1. Introduction

In higher education quality movement was initiated in the eighties of the 20th century, gained momentum during the nineties and today, with the internationalization of higher education, has become an integral component of all higher education systems. While in some countries, it has just been introduced, in others it has reached a stage of maturity. For the latter to happen in any country, it is necessary that the need for quality assurance is recognized, quality- related policies are introduced, monitoring agencies are established and the quality- assessment procedures standardized. In India, being the upcoming country in all the sectors of economy, it has become essential and important to execute the work with the quality as important parameter. Further, to develop the industries and technology, there is a need of producing human resource with certain minimum quality standards. This can be achieved through quality education. For this, we have organizations like **NAAC, NBA and ISO** to guide and monitor the designed parameters for the education system and the operational process. The basic objectives and the work procedure of these individual organizations are studied and a comparative perspective has been made. This will help in identifying the basic differences about the work culture of these organizations. **(1)**.

**Sr. Assistant Professor in Mechanical Engg. Dept. Tolani Maritime Institute, Indori, PuneIndia.*

2. **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 that laid special emphasis on upholding the quality of higher education in India. **(5)**

The system of higher education in India has expanded rapidly during the last fifty years. In spite of the built-in regulatory mechanisms that ensure satisfactory levels of quality in the functioning of higher education institutions, there have been criticism that the country has permitted the mushrooming of institutions of higher education with fancy programmes and substandard facilities and consequent dilution of standards. To address the issues of deterioration in quality, the National Policy on Education and the Plan of Action (POA-1992) have spelt out strategic plans for the policies, advocated the establishment of an independent national accreditation body. Consequently, the NAAC was established in 1994 with its headquarters at Bangalore.

Criteria for NAAC Assessment

Any assessment and subsequent accreditation is made with reference to a set of parameters so that the standing of an institution can be compared with that of other similar institutions.

NAAC has identified the following seven criteria to serve as the basis of its assessment procedures:

- Curricular Aspects
- Teaching-Learning and Evaluation
- Research, Consultancy and Extension
- Infrastructure and Learning Resources
- Student Support and Progression
- Governance and Leadership
- Innovative practices

Units of Assessment

To assess and grade the institutions of higher education using the three step process for accreditation and make the outcome as objective as possible, NAAC has developed an instrument which is same as methodology.

Institutional Accreditation:

- ***University:*** University along with all the Under Graduate and Post Graduate Departments.
- ***College:*** Any College - affiliated, constituent or autonomous with all its departments of studies.

Departmental Accreditation:

Any department/school/centre of the University.

Taking cognizance of differences in the unit of assessment, NAAC has made changes in the focus of the instrument. Thus separate instruments have been developed to suit different units of higher education. The following figure 1 elaborates the process of quality assessment by NAAC. (Please refer Fig. 1)

Criteria, Key Aspects and Weightages

Criteria and the differential weightages for Criteria are detailed in the Table 1 given below:

Assessment Indicators

Under each Criterion and each Key Aspect, a number of Assessment Indicators have been identified, which may be used as guidelines/ probes by the Peer Teams, during their visit to the Institution, to arrive at Key Aspect-wise Grade Points (KA-GPs) and Criterion-wise Grade Point Averages (CR-GPAs).

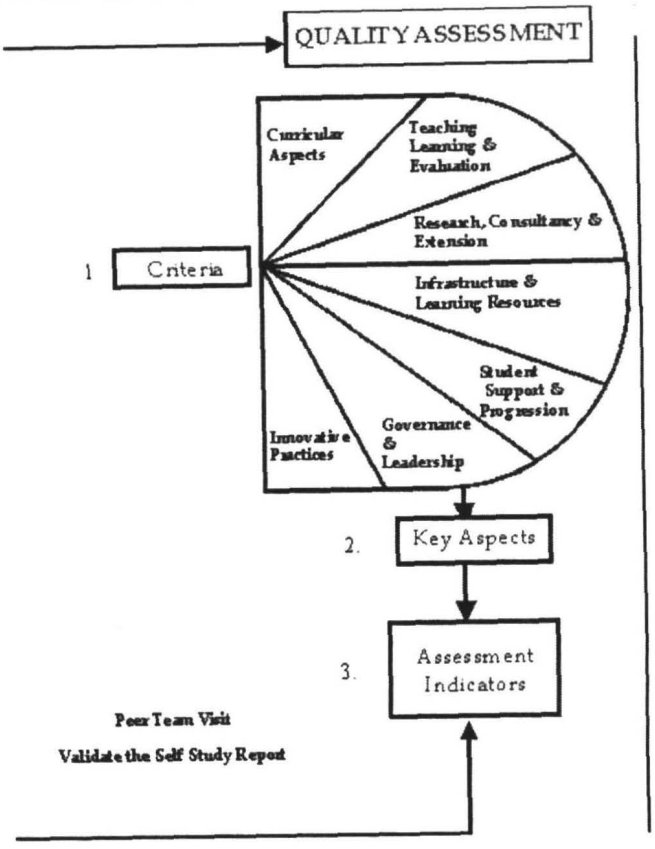

Fig. - 1

Table - 1

Sr.No.	Criteria	University	Autonomous Affiliated/ College	Constituent College
I	Curricular Aspects	150 (15%)	100 (10%)	50 (5%)
II	Teaching and Learning Evaluation	250 (25%)	350 (35%)	450 (45%)
III	Research Consultancy and Extention	200 (20%)	150 (15%)	100 (10%)
IV	Infrastructure and Learning Resources	100 (10%)	100 (10%)	100 (10%)
V	Student Support and Progression	100 (10%)	100 (10%)	100 (10%)
VI	Governance and Leadership	150 (15%)	150 (15%)	150 (15%)
VII	Innovative Practises	50 (5%)	50 (5%)	50 (5%)
	Total	**1000**	**1000**	**1000**

The Grading System

In this *Methodology*, the institutions will be graded for each Key Aspect under four categories, viz. A, B, C and D, denoting *Very Good, Good, Satisfactory and Unsatisfactory* levels, respectively. The summated score for all the Key Aspects under a Criterion, is then calculated with the appropriate weightage applied to it and the GPA is worked out for the Criterion. The Cumulative GPA (CGPA), which gives the final Assessment Outcome, is then calculated from the seven GPAs pertaining to the seven Criteria, after applying the prescribed weightage to each Criterion. At the end, each applicant institution will be awarded a *Letter Grade* to represent its quality level, along with its *Performance Descriptor* and Accreditation Status, based on the CGPA earned by it through the assessment process, as per the Table 2 given below.

3. NBA – National Board of Accreditation (NBA) is provisional Member of Washington Accord (6,7)

National Board of Accreditation (NBA) was constituted by the All India Council for Technical Education (AICTE), as an Autonomous Body, under Section 10(u) of the AICTE Act,1987. NBA conducts evaluation of technical institution or program on the basis of norms.

The objectives of NBA

To periodically conduct evaluation of technical Institutions or Programs on the basis of guidelines, Norms and Standards specified by it and to make recommendations to AICTE.

- To develop a Quality Conscious systems of Technical Education where excellence, relevance to market needs and participation

CumulativeGrade Point Grade Average(Range)	**Letter Grade**	**Performance Descri ptor**	**Interpretation of the Descriptor**
3.01 - 4.00	A	Very Good (Accredited)	High level of academic accomplishment
2.01 - 3.00	B	Good (Accredited)	Level of academic accomplishment above the minimum level expected of an institution
1.51 - 2.00	C	Satisfactory (Accredited)	Minimum level of academic accomplishment expected of an institution
< 1.50	D	Unsatisfactory (Not Accredited)	Level of academic accomplishment below the minimum level expected of an institution.

Table - 2

by all stake holders are prime and major determinants.

- To dedicate for building a technical education system, as vendors of human resources, that will match the national goals of growth by competence, contributions to economy through competitiveness and compatibility to societal development.
- To provide the Quality benchmarks targeted at Global and National Stockpile of human capital in all fields of technical education.

Accreditation

Education plays a vital role in the development of any nation. Therefore, there is a premium on both quantity (increased access) and quality (relevance and excellence of academic programmes offered) of higher education.

Like in any other domain, the method to improve quality remains the same. Finding and recognising new needs and satisfying them with products and services of international standards. The NBA has been set up to help all participating institutions assess their performance vis-a-vis set parameters.

Benefits of Accreditation

- Helps the institution to know its strengths, weaknesses and opportunities through an informed review process.
- To identify internal areas of planning and resource allocation. Enhances collegiality on the campus.
- Outcome provides funding agencies objective data for performance funding. Initiates institutions into innovative and modern methods of pedagogy.
- Gives institutions a new sense of direction and identity.
- Provides society with reliable information on quality of education offered.
- Employers have access to information on the quality of education offered to potential recruitees.
- Promotes intra and inter-institutional interactions.

What does Accreditation signify?

Accreditation signifies different things to different stakeholders.

Parents - It signifies that their child goes through a teaching-learning environment as per accepted good practices.

Students - It signifies that he has entered the portals of an institution, which has the essential and desirable features of Quality Professional Education.

Employers - It signifies that the students passing out has competence based on well grounded technical inputs

AICTE - It signifies that the institutional performance is based on assessment carried out through a competent body of Quality assessors, with Strengths & Weaknesses emanating as a feedback for policy-making

Institution - It signifies its strengths, weaknesses and opportunities for future growth.

Industry and Infrastructure Providers - it signifies identification of quality of institutional capabilities and Skills & Knowledge

Country - It signifies confidence in the suitability for sustaining stockpiles of market sensitive human capital and a pragmatic national development perspective

Alumni - It signifies attachment through the pride of passing out with credentials.

Programs that come under Accreditation by NBA

Under the provisions of the AICTE Act of 1987, NBA covers all diploma, degree and

postgraduate programs coming under the following disciplines for Accreditation

- Engineering and Technology
- Management
- Architecture
- Pharmacy
- Hotel management and Catering Technology
- Town and Country Planning
- Applied Arts and Crafts

Parameters for the measurement

Following table 3 shows the parameters and scale for the measurement

4. ISO – International Organization for standardization

ISO, in short, stands for the 'International Organization for Standardization' functioning from Geneva in Switzerland as a worldwide federation of national standards organizations. It is made up of representatives from more than 107 countries who represent their National Standardization Bodies. The Indian representative in ISO is Bureau of Indian Standards (BIS). ISO Founded in 1946 to develop industrial standards to facilitate international trade, the ISO does the work of preparing these international standards through its technical committees numbering over 130.

ISO has been derived from Greek word "isos" which means equal. "ISO" meaning equal or identical as in isotherm (equal temperature), isobars (equal pressure), isohytes (equal rainfall), isometric (equal dimension), isosceles triangle (with two equal sides), etc. It is for this reason, the word ISO was adopted as the acronym to represent the organization, which is extremely apt, since the very purpose of this organization is to standardize, i.e. equalize. **(2)**

Table - 3

Sr No.	PARAMETERS	MARKS for Diploma Colleges	MARKS for UG colleges	MARKS for PG colleges
I	Organisation and Governance	30	80	50
II	Financial Resources allocation and Utilisation	70	70	50
III	Physical Resources	50	50	50
IV	Human Resources (Faculty & Staff)	200	200	200
V	Human Resource (Student)	100	100	100
VI	Teaching and Learning Process	450	350	250
VII	Supplementary Process	50	50	50
VIII	Research and Development	50	100	250
	TOTAL SCORE	**1000**	**1000**	**1000**

ISO 9000 standard's Family

ISO 9000 family refers to the group of international standards of ISO brought out for the management of Quality Systems in organizations. Members of TC 176, the Technical Committee for the Quality System related standards at ISO, while numbering these standards, felt that it would be better to number all these related standards in a consecutively numbered series for convenience. Normally standards are numbered as they are made and the numbers allotted are sequential, with the next higher available number being given to any newly prepared standard ready for allotment of a number. By the time these Quality System related standards were ready, ISO had already made more than 8000 standards. Although reserving of a block of numbers was a deviation from practice, it was still done, in the interest of user convenience. Thus, having decided to number these standards in a series, by even keeping numbers of this series free for future use, the next higher available series of numbers being 9000, it was blocked for quality system related standards. These standards were thus called the, "ISO 9000 Series of Standards". This series of standards has now been renamed the "ISO 9000 Family of Standards". They consist of ISO 9000, ISO 9001, ISO 9004 and ISO 19011.

ISO 9000 family of standards, are related to the Quality Management System and not to the products. They aim at controlling and improving processes that help produce products rather than controlling the products themselves. They can be applied to any organization, producing any product or service, and are truly generic in nature. **(4, 8)** ISO 9001-International Standard 9001

ISO 9001 is the international standard, which lays down the requirements for a Quality Management System (QMS). This QMS in the simplest of terms is defined as,

"The process of Management of the Systems of an organization, with regard to its Quality related activities, for 'meeting and enhancing customer satisfaction and also taking care of all other interested parties such as legislative and regulatory bodies, shareholders, suppliers, employees, etc."

This International Standard is based on:

1) The "8" Quality Management Principles and 2) The "Plan-Do-Check-Act Improvement Cycle"

Quality Management Principles

a) Customer Focus,

b) Leadership,

c) Involvement of People,

d) Process Approach,

e) System Approach to Management,

f) Continual Improvement,

g) Factual Approach To Decision Making, and

h) Mutually Beneficial Supplier Relationships

The QMS Principles are such that they are applicable and common to every type of organization, be it in the manufacturing or service sector. Therefore, although the standard *remains the same, each organization interprets* the standard in its own way and then implements it to suit its requirements. This means that the standard being generic, there are a variety of ways the same standard can be applied, specific to each organization.

"Plan-Do-Check-Act Improvement Cycle"

The "Plan-Do-Check-Act Improvement Cycle" is the most fundamental and basic method of viewing any activity where the motive is, **'to do the job well and improve it continually'**. This cycle can be used to breakdown, analyze, understand and then

improve even the most complex of activities. This cycle is known as the Deming PDCA Circle, named after its originator W. Edward Deming.

Benefits of ISO 9001 to the organization -

- Fulfill customer requirements
- Keep-up with competition
- Gain a market advantage
- Provide a better framework for development and growth
- Improve the image
- Gain publicity
- Comply with export market requirement
- Create a system for identifying and defining requirements, and
- Build public confidence
- Discipline their systems
- Ensure controls
- Manage their growth and
- Continually improve themselves.

Every organization has a system of management, which basically consists of, 'a set of interrelated or interacting elements that help it in establishing its policy and objectives and achieving objectives'. This management system is made up of many smaller systems such as the financial management, the environmental management system, the quality management system, etc.

The Quality Management System (QMS) is that part of organization's management system, which focuses on the achievement of results, in relation to the quality objectives, to satisfy the needs, expectations and requirements of all interested parties. The QMS thus directs and controls all quality related activities of the organization.

The quality objectives that the QMS aims at, is to achieve, compliment other objectives of the organization such as those related to growth, funds, profit-ability, the environment, occupational health and safety, etc.

Make ISO 9001 Work for You

If someone really wants the standard to work for them, then, stop viewing it as a set of rules to be followed to solve all the problems. Just treat and view it as a tool, which, if used in the right manner, will give better results. Develop a framework for operating, analyzing and improving the organization as the primary motive.

Certification

Even after establishing, implementing and successfully maintaining the QMS as per ISO 9001, it is still essential for the organization to be able to demonstrate and prove this periodically. The organizations can achieve this through 'Third Party QMS Certification', whereby their QMS gets assessed and certified by an authorized independent body, which would issue a certificate indicating the scope and validity of certification. Moreover, during the period of the certificate's validity, it is obligatory for the certifying body to assess the organization, periodically. Therefore this certificate, issued by the certifying body indicating the scope and validity of the certification, would give the organization the necessary evidence that can be furnished for proving successful implementation and maintenance of the QMS.

There are a number of certifying bodies, which undertake this certification such as BIS (Bureau of Indian Standards), BVQI (Bureau Veritas Quality International), LRIS (Lloyd's Register Industrial Services), etc.

Please bear in mind in all the three above-mentioned approvals that "Getting certified is easy, but continuing to remain certi-fied is not so easy".

5. Comparative table showing the basic orientation of NAAC, NBA and ISO

To conclude, efforts have been made to compare the above three organizations based on the studied points. Following table 4 shows differences between the above three organizations, based on their work input and the objectives set. **(3)**

6. Conclusion

NAAC, NBA and ISO, all these organizations are striving for designing and setting the norms to judge the quality of education at the university level, at college level and at institution level and nowadays, even at departmental level. The basic aim of the work is to develop the confidence of all the stakeholders of the

Table - 4

Factors	NAAC	NBA	ISO
Formed in the year	1986	1987	1946
Apex Governing Body	University Grant Commission (UGC)	All India Council of Technical E ducation (AICTE)	International Organization for Standardiz ations ISO
Country	India	India	Switzerland
Focus	Education sector	Technical Education sector	Industry - Manufacturing and Service
Performance measuring parameters	Based on marks	Based on marks	Not specific, Generic
Grading System	Followed	Followed	Not F ollowed
Application Area	In the country (Local)	In the country (Local)	In the world (Global)
Work Flexibility	Not flexible	Not Flexible	Flexible
Certification	Yes (required)	Yes (required)	Yes (required)
Certification Scope	University/College/Instituti on/Department	College/Institution/ Department	Industry/Institution/ Organization
Quality of Product/Process	Talks about the Grade of the organization and thus quality of product and process	Talks about the Grade of the organization and thus quality of produ ct and process	Talks about the process and the work system of the organization
Philosophy behind Teaching and Learning process	Students, Parents and Teachers are considered as stakeholders . Responsibility of the process lies on everyone.	Students, Parents and Teachers are considered as stakeholders . Responsibility of the process lies on everyone.	Students and Parents are considered as external customers and Teachers are as internal customer . Responsibility of the process does not lie on external customers.

educational process and ensure flawless operation in teaching and learning process. There are differences at work culture level, at operational level and at execution level, but the overall interest is to bring out the weaknesses and strengths of the education system and to make the things happen as per design specifications, so that everyone gets benefitted at the end.

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