

COMPARATIVE ANALYSIS OF ACCREDITATION PRACTICES BY NAAC AND NBA FOR ENGINEERING INSTITUTIONS IN INDIA

S.N. Sridhara, Amity University Haryana, India (sridharasn1964@gmail.com)

ABSTRACT

In this paper, the comparative studies of criteria of assessment and their weightage in NAAC and NBA practices have been made through outcome analysis of data of accredited institutes and their ranking as awarded by these agencies. NAAC evaluates the institute with all programmes included, whereas NBA evaluates on programmes individually by an institute. NAAC's evaluation criteria are seven in number and NBA has ten criteria. The evaluation procedures in both processes are different. The institutes which have undergone both accreditation process have been graded differently by these agencies. The analysis made in this paper calls for programme specific accreditation procedure rather than accreditation of institute inclusive of all programmes offered.

Keywords: Accreditation, Engineering Education, NAAC and NBA, Evaluation of Institutes.

INTRODUCTION

India stands in third position in the world education services with 933 universities, 39,931 affiliated colleges, and 10,725 standalone institutions. (All India Survey on Higher Education 2019, <http://aishe.nic.in/>). The huge number of institutions comes with the higher responsibility of maintaining quality in education. The assessment of these institutions is carried out through accreditation.

Accreditation is a process of evaluating and rating an institute or educational programme by an external agency for confirming to set standards of educational quality. National Board of Accreditation (NBA) and National Assessment and Accreditation Council (NAAC) are two accreditation agencies in India, which are responsible for accreditation of Higher Education Institutes (HEIs). Both have been initiated by Government of India as autonomous institutions. NAAC is established through University Grant Commission (UGC) of India and NBA was initially established by All India Council for Technical Education (AICTE) in 1994 and later became autonomous institute as NBA. The actual accreditation of engineering institutes started in 1996 by NBA. Accreditation has been made mandatory for all higher educational institutes in India, after India has signed the Washington accord in 2007.

NAAC is responsible for accreditation of all HEIs and Universities in India irrespective of field of education. On the other hand, NBA is responsible for accreditation of engineering, management, pharmacy and architecture institutes. Few HEIs imparting education in engineering, management, pharmacy and architecture in India have got the accreditation from both NAAC and NBA. This has led to an interesting question as which of these two accreditation procedures is more critical in grading the education practices in HEIs. This needs a critical investigation involving comparative study between the two procedures and implications.

Ample information is available in open literature in the field of outcome based education and its implications. However, the specific literature on accreditation process and its implication on the improvement of quality of educational institutions are limited.

Y. P. Pokholkov, et.al. (2004), presented the procedures and practices of accreditation of engineering institutes in Russia. John W. Prados et.al., (2005), have elaborated on the new EC 2000 practices in accreditation of engineering courses, and opined that EC 2000 practices are the enhancement of Accreditation Board for Engineering and Technology (ABET) guidelines. According to the authors, the new guidelines emphasise on learning outcomes, assessment and continuous improvement in lieu of only curricular specifications. J. Fredericks et. al., (2007), examined the accreditation process in USA with

survey made by choosing 203 engineering programmes across 40 institutes. This investigation revealed that although there is a significant variation in practices of curriculum delivery, the accredited institutes demonstrated comparatively uniform level of student outcomes and experiences. This favoured the argument that the accreditation process will have a considerable impact on the quality of curriculum delivery. Giuliano Augusti (2007), opined that the European accreditation system raised the levels of engineering education in Europe on par with ABET and Washington accord.

G. Prasad and C. Bhar, (2010), elaborated the procedural differences among various accreditation agencies from USA, Canada, Russia, Singapore and India. Authors have also made an effort to validate the initiatives of NBA to provide a transparent and efficient accreditation process to engineering institutes. Authors conclusion is based on more of qualitative assessments rather than quantification. Authors recommend changes required in NBA for further improvement in the process of accreditation. Sivachandran Chandrasekaran et. al. (2013) showcased that the project-based design curriculum would help in realising the goals of OBE and accreditation purposes. Authors in this paper also proposed an outcome based mapping matrix, which is helpful in achieving the engineering learning outcomes. Jake M. Laguardor and Conrado IDotong, (2014) made a study on the acquiring of knowledge and skills by the faculty of Lyceum of the Philippines University, and found that faculty of engineering institute have started to contribute to the implementation of OBE practices, but had varied knowledge on assessment methods.

In the present paper, an effort is made to compare the process of accreditation done by NAAC and NBA by analyzing the criteria used and the ranking awarded by these agencies for the same institute and programme.

PROCEDURES OF NAAC AND NBA

All higher education institutions in India recognized by University Grant Commission (UGC) are eligible for applying to get NAAC certification irrespective of the programmes offered by these institutions. NAAC has different weightage for identified criteria for universities, autonomous institutes and individual institutes affiliated to universities as shown table 1. (NAAC Manual, 2019).

Table 1. Criteria and their weightage in NAAC

| Sl. No. | Criteria | Weightage | | |
|---------|---|------------|-----------------------|----------------------|
| | | University | Autonomous Institutes | Constituent Colleges |
| 1 | Curricular Aspects | 150 | 150 | 100 |
| 2 | Teaching-Learning and Evaluation | 200 | 300 | 350 |
| 3 | Research, Innovations and Extensions | 250 | 150 | 120 |
| 4 | Infrastructure and Learning Resources | 100 | 100 | 100 |
| 5 | Student Support and Progression | 100 | 100 | 130 |
| 6 | Governance, Leadership and Management | 100 | 100 | 100 |
| 7 | Institutional Values and Best Practices | 100 | 100 | 100 |
| | Total | 1000 | 1000 | 1000 |

The flow process of certification by NAAC is shown below.

1. Submission of Institutional Information for Quality Assessment (IIQA) online through portal
2. Once the IIQA is accepted, the institution is asked to submit the Self Study Report (SSR) online. SSR has 70% quantitative matrices and 30% qualitative matrices.
3. The quantitative matrices will be subjected to Data Validation and Verification (DVV) process. Simultaneously the Student Satisfaction Survey (SSS) will be conducted by sending questionnaire to students directly and getting the response.
4. Once the DVV process is passed, the peer team visits the institution for verification of qualitative matrices. The visit may last for more than two days.
5. Based on the three reports, viz., DVV, SSS and report from peer team, the NAAC grading will be awarded to institute.

6. The grading will be based on the Cumulative Grade Point Average (CGPA) obtained by the institute as shown in table 2.
7. The accreditation is valid for five years from the date of accord.

Table 2. The grade listing accorded by NAAC based on CGPA scores of institutes

| <i>Range of CGPA</i> | <i>Letter Grade</i> | <i>Status</i> |
|----------------------|---------------------|----------------|
| 3.51-4.00 | A++ | Accredited |
| 2.26-3.50 | A+ | Accredited |
| 3.10-3.25 | A | Accredited |
| 2.76-3.00 | B++ | Accredited |
| 2.51-2.75 | B+ | Accredited |
| 2.10-2.5 | B | Accredited |
| 1.51-2.0 | C | Accredited |
| <= 2.5 | D | Not Accredited |

The institutes considered by NBA for according accreditation are under two classifications as Tier – I and Tier – II. The Tier – I include all Indian Institute of Technology, Indian Institute of Science, National Institute of Technology which are established and governed by India and all types of universities and autonomous institutes affiliated to universities. The Tier – II includes institutes that are affiliated to universities but not have not obtained the autonomous status. (NBA General Manual, 2019). NBA accords accreditations to HEIs of following category shown in table 3.

Table 3. HEIs considered for accreditation by NBA. (UG: Undergraduate, PG: Post Graduate)

| <i>Sl. No.</i> | <i>Programmes</i> | <i>Level</i> |
|----------------|--|------------------------------------|
| 1 | Engineering and Technology | Diploma (3years duration), UG, PG |
| 2 | Management | PG |
| 3 | Pharmacy | Diploma, UG, PG |
| 4 | Architecture, Applied Arts and Crafts | UG, PG |
| 5 | Computer Applications | PG |
| 6 | Hotel Management and Catering Technology | UG |

NBA considers various criteria and weightage for the accreditation process of Tier – I and Tier – II institute as shown in table 4, (NBA Manual for Tier – I, NBA Manual for Tier – II institutions, 2019)

Table 4. Accreditation criteria and marks distribution in NBA process

| <i>Sl. No.</i> | <i>Criteria</i> | <i>Marks / Weightage</i> | |
|----------------|---|----------------------------|-----------------------------|
| | <i>Programme level Criteria</i> | <i>Tier – I institutes</i> | <i>Tier – II Institutes</i> |
| 1 | Vision, Mission and Program Educational Objectives | 50 | 60 |
| 2 | Program Curriculum and Teaching – Learning Processes | 100 | 120 |
| 3 | Course Outcomes and Program Outcomes | 175 | 120 |
| 4 | Students' Performance | 100 | 150 |
| 5 | Faculty Information and Contributions | 200 | 200 |
| 6 | Facilities and Technical Support | 80 | 80 |
| 7 | Continuous Improvement | 75 | 50 |
| | <i>Institute Level Criteria</i> | | |
| 8 | First Year Academics | 50 | 50 |
| 9 | Student Support Systems | 50 | 50 |
| 10 | Governance, Institutional Support and Financial Resources | 120 | 120 |
| | Total | 1000 | 1000 |

The flow process in NBA is as follows:

1. Registering of institution in e-NBA website and filling the pre-qualifier details.
2. Once the pre-qualifier is passed, the Self-Assessment Report (SAR) shall be uploaded.
3. NBA Evaluation Team will visit the institute for a thorough assessment and the report is submitted to moderation committee.
4. The moderation committee informs the institute about the evaluation outcome of evaluation committee and invites appeal if any against the outcome result.
5. The moderation committee relooks at evaluation reports in the light of appeal from institute and recommends the results to Engineering Evaluation and Accreditation Committee (EAC), which in turn submits the report to sub committee of AAC. After the deliberations from AAC, the accreditation result is conveyed to the institute.
6. NBA does not accord any grade unlike NAAC, instead accord the accreditation in two category, (i) accreditation for six years and (ii) accreditation for three years based on the results and other parameters as shown in table 5 for Tier – II institutions. Similar minimum scoring desired for Tier – I institutes are also specified in the NBA manuals.
7. Earlier to 2019, NBA had a practice of according, accreditation for 2, 3 and 5 years respectively based on similar scores and complying to conditions.

Table 5. The parameters considered by NBA for the accord of accreditation after the evaluation process for Tier – II Institutions

| <i>Item</i> | <i>Minimum Score out of 1000</i> | <i>Minimum score in selected Criteria</i> | <i>Faculty Student Ratio for last three years</i> | <i>Number of Ph.D. holders in the department</i> | <i>Admission status of the Programme (department) and Institution</i> |
|--|----------------------------------|---|---|---|--|
| Six years Accreditation | 750 | 60% in criteria 4 to 6 | 1:15 | 30% of required faculty averaged about last two years | 75% at programme level and 50% at institute level for last three years |
| Three years Accreditation | 600 | 40% in criteria 5 | 1:25 | 10% of required faculty averaged about last two years | 50% at programme level and 50% at institute level for last three years |
| Earlier to 2019, NBA had a practice of according, accreditation for 2, 3 and 5 years respectively based on similar scores and complying to conditions. | | | | | |

SURVEY AND RESULTS

A total of 5,648 HEIs including universities have been accredited by NAAC, whereas a total of 1,115 HEIs have been accredited by NBA till Oct 2019. The HEIs which have obtained both NAAC and NBA accreditations are 686 in number till Oct 2019. These data have been extracted from the respective web portals of NAAC and NBA.

It is to be noted that the NAAC accords accreditation to the HEI as a whole, while NBA accords accreditation to the programmes offered by HEIs. Hence, while comparing the accreditation results as accorded by the NAAC and NBA for same institution and programme, a careful consideration of number of programmes in a particular HEI is to be considered. This exercise has been carefully done in the current research work. Huge data bases from NAAC and NBA portal have been reduced to pick out the institutes who are successful in getting both accreditations, and then the number of programmes they have undergone have also been noted. The grades accorded by NAAC and the accreditation accorded by NBA in terms of number of years are compared to analyse the relative effectiveness in the evaluation system.

Referring to table 1 and table 4, the number of criteria considered by NAAC are 7 in number while these are 10 in number in NBA. Although, these criteria appear to differ at outset, the sub-entries to be made in

each criterion, which are referred as Key Indicators (KI) in NAAC practice, and matrices used in each criteria in NBA match with each other. The equivalence of these criteria are shown in table 6.

Table 6. The equivalence of criteria in NAAC and NBA. Refer table 1 and table 4.

| Sl. No. | Criterion in NAAC | Equivalent Criteria in NBA |
|---------|---|----------------------------|
| 1 | Curricular Aspects | Criteria 1 and 2 |
| 2 | Teaching-Learning and Evaluation | Criteria 2, 3, 4 and 8 |
| 3 | Research, Innovations and Extensions | Criteria 4 and 5 |
| 4 | Infrastructure and Learning Resources | Criteria 6 |
| 5 | Student Support and Progression | Criteria 7 and 9 |
| 6 | Governance, Leadership and Management | Criteria 10 |
| 7 | Institutional Values and Best Practices | Criteria 1 and 10 |

Weightages given in both NAAC and NBA for equivalent criteria are almost similar, yet, both according institutes differ in evaluation procedure. NAAC depends heavily on DVV results generated by the system based on the quantitative matrix for about 70%. The remaining 30% share of marks scored is considered from the peer team visiting the institution whose primary job is to verify the information provided by the institute on qualitative data. On the other hand, the entire qualitative and quantitative data verification is done by the peer team of NBA which visits the institute. Thus, the human touch and emotional influence of resources persons in the peer team is higher in NBA.

The grading comparison of institutes which have got both NAAC and NBA is shown in Fig. 1 and 2. The grading given by NAAC is in alphabets with A++ indicating highest and B indicating the lowest. The institutional grading is shown for 2, 3 and 5 years by NBA earlier to the implementation of new guidelines in late 2019. Thus, 5 years of accreditation indicate highest scores and 2 years of accreditation depicts lowest scores in NBA.

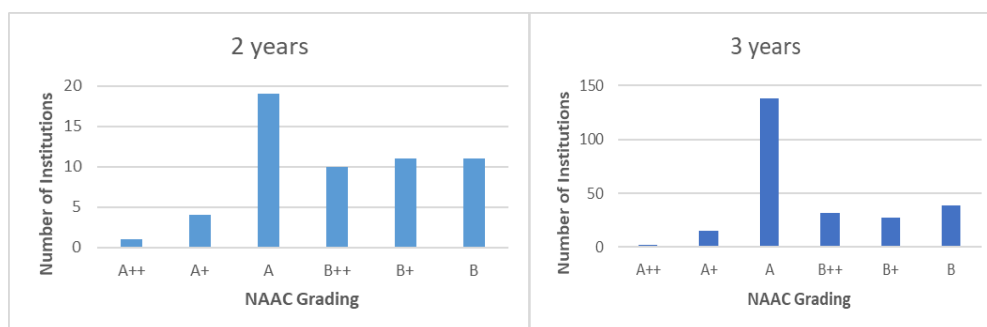


Figure 1. Grading pattern of accreditation by NAAC for institutions which obtained 2 and 3 years of accreditation by NBA

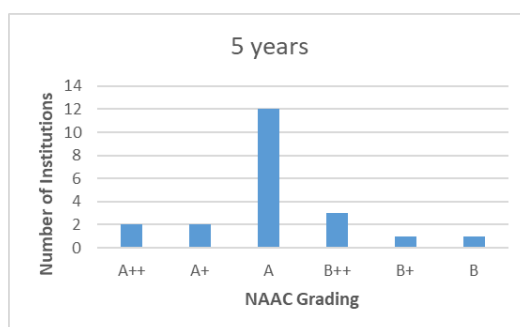


Figure 2. Grading pattern of accreditation by NAAC for institutions which obtained 5 years of accreditation by NBA

Following observations are made from the figures 1 and 2.

1. Large number of institutions (76.6%) have been graded average by NBA with only 3 years of accreditation, and mere 6.4% of institutes have been able to get highest grading of 5 years of accreditation.
2. On an average 51% of institutes have been successful in getting 'A' Grade from NAAC
3. There is no similarity in rating accorded by NAAC and NBA. The institutes scoring high ranking by NAAC may or may not have accorded with good ranking by NBA.
4. The institutes scoring grades more than 'A' by NAAC would be expected to get good ranking by NBA also, but many have scored the least by getting accreditation for only 2 and 3 years (Fig. 1 and 2)
5. It is expected that an institute accorded with 5 years accreditation by NBA would score beyond 'A' grade from NAAC. On the contrary, a few institutes in this category have been badly ranked by NAAC with scores less than 'A' (Fig. 3)

CONCLUSIONS

The accreditation results by NAAC and NBA show wide difference in the evaluation procedure which led to large variation in the results of grading done by these two accreditation agencies. The major difference between the evaluation procedure between these two agencies are (i) NAAC evaluates the institution as a whole, while the NBA evaluates programme offered by an institute and grants accreditation to only programmes and (ii) 70% marks is awarded by DVV based on the content uploaded by institute and remaining 30% is awarded by the peer team in NAAC, while, entire 100% marks is awarded by peer team in NBA. It appears that programme specific accreditation procedure would be more appropriate for granting accreditation, rather than the accreditation of the institute inclusive of all programmes offered.

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