

ACCREDITATION IN INDIA: PATH OF ACHIEVING EDUCATIONAL EXCELLENCE

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ABSTRACT

This article identifies the noteworthy role played by various statutory bodies constituted and expanded by the Indian Government for the purpose of quality assurance and attainment of sustainable excellence in the Indian higher education system. Accreditation has now become vital for all universities in India except those created through an act of Parliament. Without accreditation, these institutions have no legal entity to call themselves a University and award 'Degrees' which are not treated as valid for academic/employment purposes. Since quality assurance is an evolving issue the emphasis is deliberately given to excellence and quality as the distinct constituents of higher education in India. This is done through a combination of self and external quality evaluations, endorsements and sustenance initiatives. This paper also highlights existing key issues of the accreditation process and vital points that need to be incorporated to generate insights about the future of accreditation.

JEL: I2, I23

KEYWORDS: Accreditation, Educational, Excellence, India, Path

INTRODUCTION

In understanding how the higher education system is regulated it is essential to realize the difference between “accreditation” and “recognition” in India. Until recent years, being “recognized” was the only mode of validating postsecondary institutions. The process involved evaluation of the institution in question by the recognizing agency in order to establish whether it meets the standards and norms put forth by the agency. Unlike the usual accreditation process which involves periodic review by the accreditation agency to ascertain if an institution is meeting its objectives and established standards, whereas “recognition” is a one-time process.

Higher education accreditation is a type of quality assurance process under which services and operations of post-secondary educational institutions or programs are evaluated by an external body to determine if applicable standards are met. If standards are met, accredited status is granted by the agency”. (*Wikipedia*) Accreditation is broadly used for understanding the “Quality Status” of an institution. In the context of Higher Education, the accreditation status indicates that the particular Higher Educational Institutions (HEI) – a College, a University, or any other recognized Unit therein, meets the standards of quality as set by the Accreditation Agency, in terms of its performance, related to the educational processes and outcomes, covering the curriculum, teaching-learning, evaluation, faculty, research, infrastructure, learning resources, organization, governance, financial well being and student services (NAAC). Basically accreditation is the process by which a (non-)governmental or private body evaluates the quality of a higher education institution as a whole or of a specific educational programme in order to formally recognize it as having met certain predetermined minimal criteria or standards. The result of this process is usually the awarding of a status (a yes/no decision), of recognition, and sometimes of a license to operate within a time-limited validity. (Vlăsceanu, *et al.*, 2007, p. 25)

Accreditation is important because: 1. the institution knows its strengths, weaknesses, and opportunities through an informed review process, 2. the identification of internal areas of planning and resource

allocation collegiality on the campus, 3. funding agencies look for objective data for performance funding, 4. The institution initiates innovative and modern methods of pedagogy. 5. A new sense of direction and identity for the institution, 6. provides society with reliable information on the quality education offered. 7. Provides employers reliable information on the quality of education offered to the prospective recruits and 8. Intra and inter-institutional interactions. (*Source: NAAC*)

This article is a deliberate attempt to understand and analyze the current accreditation process and its significance in making Indian higher education system a world class higher education system. To attain this objective the present research first reviews the findings of recent studies on the issue under the. Then the paper highlights the key trends of accreditation and its evolution in higher education in India by the various statutory bodies to explore the prospects of bringing excellence in Indian education system under the section of. Finally, the article generates noteworthy insights under the section titled the future of accreditation process in India. The paper closes with some concluding comments.

LITERATURE REVIEW

The Indian education system has its roots in the system inherited from the British at independence in 1947 (Patil, 2007). The Indian higher education system is one of the largest of its kind in the world. In spite of several built-in quality controls, such as the University Grants Commission's guidelines and the affiliating functions of the university, deterioration in the quality of higher education was a serious concern for all stakeholders (Pillai & Srinivas, 2006). In 1994 India established the National Assessment and Accreditation Council (NAAC) to ensure and enhance the quality of Indian higher education and to play an international role as a quality assurance agency. The NAAC has made its assessment and accreditation process acceptable to the institutions and academia through an intensive awareness campaign and academic interactions involving various universities, colleges, state higher education councils and other academic forums. However, it is equally important to obtain continuous feedback from the beneficiaries in the field to determine the effectiveness and enhance the efficiency of the organization. This study shows that 18 years of its existence the NAAC has earned substantial goodwill and appreciation from the academic community. Simultaneously, it also suggests a need for incessant effort on the part of the NAAC to strengthen and fine-tune its processes and procedures.

As increasing numbers of young Indians are striving for a better life, in these challenging times, a few questions arise. Is the education system ready for this surge? Are they getting good quality education? Are there young qualified teachers, libraries, equipment and facilities? Of the many Institute rankings conducted in the country every year, parameters stressed are infrastructure-physical, knowledge centers, teaching aids; education process, faculty, research, consultancy, publications and Management Development Programmes (MDPs); academic programmes—admission, curriculum, delivery systems; social responsibility; placement and industry interface. Most institutes have good physical and academic infrastructure but have problems in other areas. Moreover, the quality of an institution is not based on the infrastructure quality alone, but on many other equally important factors. The worst area of performance among the majority of B-schools has been the poor faculty and lack of research orientation (Sinha, 2007).

The objective of the accreditation process is to develop a quality conscious system of technical education where excellence, relevance to market needs and participation by all stake holders are ensured. The process focuses on building a professional 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. It intends to ensure a teaching-learning environment as per accepted good practices and institutions which has the essential and desirable features of quality professional education. For institutions, it signifies their strengths, weaknesses and opportunities for future growth, for the industry and infrastructure providers, it signifies, identification of quality of institutional capabilities. (Sahay &Thakur, 2007).

Accreditation principles are based on best practices in business education. These principles promote excellence in business education through a benchmarking process, which is helpful in determining why the institution is, or is not, achieving its mission and broad-based goals, and in interpreting the results of the outcomes assessment process. Within the value chain, for each of the activities, institutions must achieve and demonstrate an acceptable level of performance consistent with their mission while satisfying defined standards. Just as managers face rising expectations for their performance and the performance of their organizations, programs in management education also should anticipate rising expectations, even within a given mission. No fixed curriculum, specific set of faculty credentials, single type of faculty performance, or approach to instruction will suffice over time. The processes used to strengthen curricula, develop faculty, improve instruction, and enhance intellectual activity determine the direction and rate of improvement. Thus, these processes become important along with the necessary review of inputs and assessment of outcomes. (Sahay & Thakur, 2007)

A recent Indian study (Dey, 2011) thoroughly evaluates the significance of accreditation in the Indian education system. The study reviews the outcome of accreditation exercises undertaken by agencies like NAAC and NBA. They find these exercises have significant impact on improving the quality of higher education. The strengths and shortcomings of the institutions are detected for initiating appropriate action. The stakeholders- the government, students and employers- duly benefit from information and analysis of institutional performance. A joint effort between institutions and accreditation bodies would be needed to ensure good coordination and communication, so that they can adhere to an ethical code of good practice and be objective, fair and rigorous in the task of accomplishing quality assessment and accreditation.

Another work (Mangnale et.al, 2011) investigates the role of Internal Quality Assurance Cell (IQAC) in quality management in education in Maharashtra state of India. The findings exposed that institutions were confidently provided academic activity reflecting their goals and objectives with highly qualified faculty through an eclectic approach with the support of research with ample focus on library and community services. Students also expressed different indecisive perceptions on the academic activity, faculty communication skills, motivation and mentoring etc. Only 80% OF students responded positively about the faculty subject knowledge and sports, and infrastructure facilities provided by the institution. The author concluded that both institutions and students wanted a more constructive role from the Internal Quality Assurance Cell (IQAC) in protecting the quality of higher education.

Accreditation is fast becoming the dominant method of evaluation in the European Higher Education Area (Stensaker, 2011). Research traces the political process supporting the introduction of this method in Europe and identifies different theoretical understandings and practices which shed light on how we can interpret the spread and role of accreditation in Europe, before discussing current trends in European and US accreditation, which could pave the way for a joint research agenda.

ACCREDITATION IN INDIA

“Quality is a concept; it’s a philosophy; it’s a journey; it’s also what we practice. We at NAAC strive to create awareness and understanding of quality, and quality assurance in higher education as a necessary ingredient to national development”. (Prasad, 2007; Former Director, NAAC).

In India accreditation for higher learning is overseen by autonomous institutions established by the University Grants Commission. Accreditation for universities in India is required by law unless the university was created through an act of Parliament. Without accreditation, these institutions have no legal entity to call themselves a University/Vishwavidyalaya and to award degrees which are not treated as valid for academic/employment purposes. (Wikipedia). In recent times the Indian government has taken initiatives to establish a systematic mechanism for accreditation in order to maintain and elevate the

quality of higher education in India. Emphasis on higher education in India can be understood by the number of universities currently present in India and the quality of education they provide.

The number of Universities/University-level institutions has increased 18 times from 27 in 1950 to 504 in 2009. The sector boasts 42 Central universities, 243 State universities, 53 State Private universities, 130 Deemed universities, 33 Institutions of National Importance (established under Acts of Parliament) and five Institutions (established under various State legislations). The number of colleges has also increase with just 578 in 1950 growing to more than 30,000 in 2011. (Data Source: MHRD).

The Indian system of higher education has always responded well to the challenges of the time. Two decades ago, when the system came under severe criticism that it had allowed the mushrooming of higher education institutions (HEIs), compromising the quality of educational offerings, the Ministry of Human Resource Development (MHRD) and the University Grants Commission (UGC) took initiatives to restore the standards of higher education. Consequently, the National Policy on Education (1986) places special emphasis on upholding the quality of higher education in India. On the recommendations of the Programme of Action (1992) document that provided the guidelines for implementation of the National Policy on Education (1986), in 1994, the UGC established the National Assessment and Accreditation Council. (Prasad & Stella, 2004).

The Ministry of Human Resource Development (MHRD)

The Ministry of Human Resource Development (MHRD) is responsible for supervising the functioning of all the universities in India through its chief regulatory body- Universities Grants Commission (UGC). The other government organizations whose contribution to the Indian educational scenario worth mentioning are All India Council for Technical Education (AICTE) and National Assessment and Accreditation Council (NAAC). The following statutory bodies have been constituted by the Indian government which have been in active role in assuring and maintaining the quality and standards of higher education system in India.

University Grant Commission (UGC)

UGC is the apex body that provides recognition for universities in India. In 1956, UGC was established as a statutory body of the Government of India through an Act of Parliament. It is responsible for the determination and maintenance of standards of teaching, examination and research within the context of university education in India. It also keeps track of the financial needs of universities and allocates and disburses grants to universities and colleges. The UGC serves as the vital link between the Central and State governments and other institutions of higher learning, and advises them on the measures necessary for the improvement of university education. The UGC's mandate includes Promoting and coordinating university education; Determining and maintaining standards of teaching, examination and research in Universities; Framing regulations on minimum standards of education; Monitoring developments in the field of collegiate and university education; Disbursing grants to the Universities and Colleges; Serving as a vital link between the Union and State Governments and institutions of higher learning; Advising the Central and State Governments on the measures necessary for improvement of university education. To monitor standards of the higher educational institutions the National Assessment and Accreditation Council (NAAC) was created as an autonomous body, under section 12 (c) of its Act in September 1994.

National Assessment and Accreditation Council (NAAC)

National Assessment and Accreditation Council (NAAC) was established by the UGC in September 1994 at Bangalore for evaluating the performance of the Universities and Colleges in the Country. NAAC's mandate includes the task of performance evaluation, assessment and accreditation of universities and

colleges in the country. The philosophy of NAAC is based on objective and continuous improvement rather than being punitive or judgmental, so that all institutions of higher learning are empowered to maximize their resources, opportunities and capabilities. Assessment is a performance evaluation of an institution and/or its units and is accomplished through a process based on self-study and peer review using defined criteria. Accreditation refers to the certification given by NAAC which is valid for a period of five years. At present the Assessment and Accreditation by NAAC is done on a voluntary basis. The prime agenda of NAAC is to Assess and Accredite Institutions of higher learning with an objective of helping them work continuously to improve the quality of education. Assessment is a performance evaluation of an HEI and/or its units and is accomplished through a process based on self-study and peer review using defined criteria. Accreditation refers to the certification given by NAAC which is valid for a period of five years. NAAC is entrusted with the task of performance evaluation, assessment and accreditation of Universities and Colleges in the Country. NAAC has been instilling a momentum of quality consciousness amongst Higher Educational Institutions (HEIs or 'Institutions'), aiming for continuous improvement. NAAC is triggering a 'Quality Culture' among the various constituents of the HEI, as well as enhancing the awareness of Institutional Quality Assurance with all stakeholders.

The mission of NAAC is to evaluate and accredit higher education institutions on the basis of clearly defined criteria that include: 1. The Curriculum 2. Teaching and Student Assessment 3. Infrastructure and Resources 4. Student Support and Progression 5. Institutional Management. NAAC will release a new rating manual soon where the focus will be on new challenges emerging from diverse institutions. (Source: Times of India, Feb 25, 2012) "As of now, we have a single manual for all types of institutions but it is not adequate to address the challenges emerging from the newer types of higher education institutions". (H.A. Ranganath, Director, NAAC-Source: TOI, Feb 25)

All India Council for Technical Education (AICTE)

This organization was established in November, (1945) as a regulatory council to ensure proper planning and development of technical education in India and for maintaining norms and standards in the field. This includes areas of study such as engineering, technology, pharmaceutical sciences, architecture, town planning, hotel management, catering technology and applied arts and crafts. The Council has the authority to establish regulatory measures related to courses, curricula, facilities, etc, grant approval to start new technical institutions and introduce new courses.

The Government of India (Ministry of Human Resource Development) also constitutes a National Working Group to look into the role of AICTE in the context of proliferation of technical institutions, maintenance of standards and other related matters. The Working Group recommended that AICTE be vested with the necessary statutory authority for making it more effective, which would consequently require restructuring and strengthening with necessary infrastructure and operating mechanisms. The purview of AICTE (the Council) covers programmes of technical education including training and research in Engineering, Technology, Architecture, Town Planning, Management, Pharmacy, Applied Arts and Crafts, Hotel Management and Catering Technology etc. at different levels (AICTE). It can also make recommendations regarding the recognition and de-recognition of institutions and programs through the National Board of Accreditation.

National Board of Accreditation (NBA)

NBA is established by the AICTE, this body periodically evaluates technical institutions and programs based on the norms and standards laid down by the Council. The difference between AICTE approval and NBA accreditation is that the former regulates whether the institution meets the initial requirements of functioning as a technical education provider or offering a new program whereas the latter monitors

whether the institution has proved its ability to sustain and improve upon assessment criteria and has earned credibility by the end users.

NBA in its present form came into existence as an autonomous body on 7th January, 2010, under the aegis of AICTE, with the objective of assurance of quality and relevance of education especially in technical disciplines. NBA has been facilitated improvement of quality and relevance of technical and professional education in the country to bring it to par with international standards. NBA also aspires to become a permanent member of the Washington Accord, which was signed, first in 1989 among accreditation agencies of some countries in order to recognize substantial equivalence in qualifications. (NBA) NBA is working with the mission, “to stimulate the quality of teaching, self evaluation and accountability in higher education, which help institutions, realize their academic objectives and adopt teaching practices that enable them to produce high quality professionals and to assess and accredit the programs offered by colleges and/or institutions imparting technical and professional education.” (Source, WOSA 2012, NBA)

Professional Regulatory Councils

Professional councils are also responsible for the recognition of professional programs, promotion of professional institutions and the providing the grants to undergraduate programs. The statutory professional councils are: (Patil, 2007)

- All India Council for Technical Education (AICTE)
- Department of Electronics Accreditation of Computer Courses (DOEACC):
- Distance Education Council (DEC)
- Indian Council for Agricultural Research (ICAR)
- Bar Council of India (BCI)
- National Council for Teacher Education (NCTE)
- Rehabilitation Council of India
- Medical Council of India
- Pharmacy Council of India (PCI)
- Indian Nursing Council (INC)
- Dentist Council of India (DCI)
- Central Council of Homeopathy (CCH)
- Central Council of Indian Medicine
- Council for Architecture
- National Council for Rural Institute
- State Councils for Higher Education

FINDINGS AND HIGHLIGHTING KEY ISSUES

The review of the practice of accreditation suggests that it enhances educational excellence as reflected in the key findings highlighted. The significance of accreditation is assuring quality in Education system in India. 1. Accreditation is a process of evaluation of an institution of higher learning. 2. Accreditation is the certification of an institution for a particular period of time in terms of a threshold standard. 3. It serves as a benchmarking tool to improve services by analyzing best practices of other organizations to determine standards of performance and how to achieve them in order to increase customer’s satisfaction. (Lewis & Smith, 1994) 4. Benchmark is a comparative standard that every organization strives to achieve. 5. Accreditation leads to performance excellence and total quality management. 6. It is an ongoing external review process for institutions and programmes continue to be reviewed over time for re-accreditation ranging from five years to ten years. 7. Institutions prepare a written summary based on the

standard criteria of the accrediting body. 8. The specific application model of various statutory bodies (NAAC, NBA, DEC etc) are variant to serve specialized needs, but the underlying philosophies of all these models are self-study and external quality assessment. (Prasad, 2007). 9. It stimulates the academic environment for promotion of quality of teaching learning and research. 10. Accreditation provides the quality assurance framework for the academic institutions. 11. Accreditation aims to continuously improve the education system and education is back bone of any society, hence contributing to societal and further national development. 11. Accelerates and nurtures Global Competency among students and also helps in inculcating value systems in student community. 12. Accreditation overall pursues for excellence in education.

The Future of Accreditation-An Insight

Since accreditation has become globally significant, this research presents the evidence from the accreditation process in Indian context. We highlight the present scenario and also open pathways to look upon future prospects of accreditation by understanding its relevance in education and the business world. The implication of accreditation can be well assessed through the recent fashion that most employers now prefer to employ job applicants who have gained their education from an institute, college or university with the proper accreditation status. Many employers also look to see that employees have been educated at an appropriately accredited institution when making decisions about business promotions, company advancements, and whether to provide assistance for employees who intend to further their education. It is likely to be practiced worldwide and will be considered an essential standard of education by all stakeholders-the employers, students, business owners, etc. India is no exception to this rule.

The present piece of work also emphasizes that today educational institutions function in a rapid changing and dynamic environment where there are demands and challenges that require innovations. A review of the literature suggest that the purpose of accreditation is to ensure whether the changes in technology, rapid advancements which are leading challenging demands are met by the educational or professional institution. While formulating its Core Values for Accreditation framework, NAAC is in cognizance of the swift changes and consequent metamorphosis in values pertaining to the Indian Higher Education (NAAC).

This is quoted by IAO that “accreditation can influence a prospective student's decision to join traditional campus-based educational institutes as they are understandably concerned about the authenticity of their degrees and its acceptability”. The NAAC has produced its new Manuals for Universities, Autonomous Colleges and Affiliated Colleges. (*Source*, NAAC, May 25, 2012). Apart from effective functioning of government accrediting bodies like NAAC, NBA etc, studies suggest that an institution should also construct an active Internal Quality Assurance Cell (IQAC) to internally regulate educational qualities and assuring excellence on various academic parameters set by the government regulatory bodies.

On the basis of a review of current accreditation processes in India, the present article makes some proposals for the future of accreditation. We argue that accreditation should be taken into contemplation to maintain and uplift the Indian higher education system so as to make it an ultimate benchmark for world class education system. This can be done as follows. 1. The accreditation system/body must be trustworthy in terms of academic competence, fairness, and high degree of transparency as well as should be recognized. 2. The legal framework in which accreditation system operates must secure its independence from the government to a certain extent. 3. The accrediting member and the site visit team must be highly esteemed and respected within the profession. 4. The organizing body should be well aware of the predetermined criteria and about the process/purposes of accreditation and its outcome. 5. The standard process of accreditation must include the following stages-self-evaluation, an external evaluation, a final report by the site visit team and the decision on accreditation. 6. Publication of a summary of the report providing the basis for decision should be considered. Such practice will not only

fulfill the essentials of accreditation criteria but also may change the face of future accreditation process to excel and set benchmarks for other nations to not only help in facilitating mobility of Indian students but also draw students from abroad to these institutions in future.

CONCLUSION

This research discussed how accreditation has taken a significant place in the Indian government to bring excellence in higher education. Higher education is the backbone of the society. It is the quality of higher education that decides the quality of human resources in a country (Prasad, 2007). Thus quality assurance is a vital aspect in the education world. For this purpose Accreditation has come into the picture. On the basis of the above review and discussion on the denotation and objectives of the accreditation it can be understood as the process of quality assurance. It involves giving credit where it is due for some clearly visible and demonstrable strategies of academic activities and objectives of the institutions, known to be honestly pursued and efficiently achieved by the resources currently available with a potential for continuous improvement in quality for effective growth (NBA). Through establishing various statutory bodies in India like NAAC, NBA etc, the Indian higher education has addressed a major impediment that prevented the recognition of most university degrees. Focus has shifted to the future face of accreditation and the importance of education to the various stakeholders.

Accreditation ideology are based on best practices in education. This philosophy promotes excellence in education through a benchmarking process, which is helpful in determining why the institution is, or is not, achieving its mission and broad-based goals, and in interpreting the results of the outcomes assessment process.

Certain limitations of this study might open the avenues of future research in this area. The scope of the study could have been broadened by adopting an appreciative approach to accreditation process. Furthermore within the Indian context the responses could have been openly taken from the people directly associated with the various statutory accrediting bodies in India. This could help discover and highlight certain issues which might have gone untouched in the present study. Based on such results, future research on this area can be planned including an interesting follow-up to validate and critically evaluate the theory built in the present work.

REFERENCES

- Anand, A. (1970). Accreditation: The benchmark of excellence for an Indian University, Article published online. Indiaeducationreview.com
- Dey, Niradhar. (2011). Quality Assurance and Accreditation in Higher Education in India. *Academic Research International*, vol.1 (1), p.104-110.
- Lewis, R.G. and Smith, D.H.(1994). Total Quality in Higher Education, Delrey Beech. St. Lucie Press.
- Mangnale, V.S.& Rajasekhara, M.P.(2011). Quality Management in Indian Higher Education System: The role of IQAC. *Asian Journal of Business Management*, vol.3 (4), p.251-256.
- Patil, Jagannath. (2007). WES Evaluation of the Three Years Bachelor's Degree from India. World Education Services, New York.
- Pillai, K. N. M.;Srinivas, G. (2006). A Study of the Post-accreditation Scenario in the North Eastern Region of India: a meta-evaluation of the National Assessment and Accreditation Council processes and procedures. *Quality in Higher Education*, vol.12 (1), p.95-106.

Prasad, V.S. (2007). *Quality Assurance in Higher Education: An Introduction (Revised Edition)*. NAAC, Bangalore.

Prasad, V.S.; Stella, Antony. (2004). *Accreditation of Higher Education Institutions: Accreditation of Higher Education Institutions: Paper presented in the NAAC-COL Round Table Conference on “Innovations in Teacher Education: International Practices on Quality Assurance”*, March 17-19, 2004, Bangalore.

Sahay, B.S. & Thakur, R. Rajiv (2007). Excellence through Accreditation in Indian B-Schools. *Global Journal of Flexible Systems Management*, vol.8, (4) P.9-16.

Stensaker, Bjorn. (2011). Accreditation of higher education in Europe – moving towards the US model? *Journal of Education Policy*, vol.26 (6), p.757-769.

http://ierf.org/pdf/Nafsa09_handout.pdf

http://www.naac.gov.in/assessment_accreditation

<http://www.academics-india.com>

<http://www.indiaeducation.net>

<http://www.ebscohost.com>

<http://www.ugc.ac.in>

<http://www.wes.org>

<http://www.nba-wosa.in>

<http://www.aicte-india.org>

<http://www.nba-aicte.ernet.in>

<http://Indiaeducationreview.com>

<http://www.searo.who.int>

<http://www.iao.org/>

<http://www.worldwidelearn.com>

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