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THE IMPACT OF ACCREDITATION ON ENGINEERING COLLEGE LIBRARIES IN MUMBAI WITH REGARD TO INFRASTRUCTURE

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ABSTRACT

Higher education in India today has grown and multiplied at an amazing pace. This demand coupled with an alarming expansion creates a number of challenges for the regulatory bodies in the context of maintaining and enhancing quality. Accreditation is one of the measures of Quality Assurance designed to assess the quality of an educational institution. Engineering institutions are regulated by the AICTE and their accreditation is undertaken by the National Board of Accreditation (NBA). The quality of an engineering institution as a whole is dependent on the quality of its various components including the library. This study was undertaken in order to find out the impact of Accreditation on engineering college libraries in Mumbai with regard to infrastructure. The research methodology included questionnaire, interview and observation. Various suggestions have been proposed by the researcher on the basis of the above findings. It has been suggested that the management of the engineering college as well as the regulatory and governing bodies take into account the importance and impact of Accreditation to the engineering library. Finally the librarian should consider the positive impact of Accreditation and recognize that both the library as well as the users will benefit from this exercise.

Key words: Accreditation, Impact of Accreditation, Influence of Accreditation, Libraries, Academic Libraries, Engineering College Libraries.

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1. INTRODUCTION

The library has always been perceived as the heart of every academic institution, a place of fundamental importance to every student, teacher and researcher on campus. An academic library serves two main purposes-it supports the educational curriculum, and it supports the research focus of its faculty and students. The library frames various objectives, while keeping in mind the vision and mission of the parent institute.

It is a well-known fact that India has the third largest Higher Education system in the world, next only to the United States and China. But in recent times the Indian higher education system has been growing at a pace which is both promising as well as alarming. The National Employability Report for the year 2014 states that “less than 20% engineers are employable for software jobs and only 7.49% are employable for core engineering jobs, even though more than 90% of students aspire for such jobs”.

Engineering institutes in India come under the governance of the All India Council of Technical Education (AICTE) Under the UGC (Mandatory Assessment and Accreditation of Higher Educational Institutions) Regulations 2012, Accreditation has now become compulsory for all engineering institutions and is carried out by the National Board of Accreditation (NBA). The library being an integral part of this educational set-up is also subject to this accreditation process. In today's information age, it is perceived that both the library and the classroom are partners in the teaching-learning process. It is therefore necessary that the library as a vital information resource sets a high benchmark in terms of the quality of its infrastructure, collection, facilities and services.

With the growing number of engineering institutions and the growing intake capacity, it is hoped that the process of Accreditation will compel institutes of higher learning to set up and maintain quality libraries equipped with all the resources necessary in the electronic information age.

2. DEFINITION OF TERMS

It is imperative that the following terms are defined, with regard to this research study.

2.1. Academic Libraries

The word “academic” is associated with learning, study, education or teaching. Academic libraries are situated on the campus of the educational institution of which they are a part, although they might sometimes be housed in a separate building. Academic libraries include school, college and university libraries.

2.2. Engineering

The American Engineers' Council for Professional Development defines Engineering as “The creative application of scientific principles to design or develop structures, machines, apparatus, or manufacturing processes, or works utilizing them singly or in combination; or to construct or operate the same with full cognizance of their design; or to forecast their behavior under specific operating conditions; all as respects an intended function, economics of operation and safety to life and property.”

2.3. Accreditation

Accreditation is a process by which a 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 pre-determined 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.

The word “Impact” suggests a strong marked effect or influence of a particular idea, decision or process. This influence could be positive or negative. It could also be short-term or long-term depending on other sub-processes that could be associated with it. In the context of Accreditation of engineering college libraries in Mumbai, the researcher aims to understand the influence of the process of Accreditation on various aspects of the engineering college library. Other sub processes like the views and role of the librarian and library staff also come into play.

3. REVIEW OF LITERATURE

A literature review is a critical and evaluative report of the information found in the literature related to the researcher’s area of study. The literature review often describes in brief, creates a summary of the main ideas, evaluates the ideas and concepts explained in the literature and sometimes provides clarification with regard to the topic at hand. In the context of this research, a study was made of different primary, secondary and tertiary sources of literature. The literature review was then divided into a sequenced number of sections leading to the main topic of study. It was found that a number of authors have researched and analysed the role of Accreditation with regard to academic libraries in general and engineering college libraries in particular. The review of literature demonstrates the importance of accreditation, the indicators of quality assessment as well as the difficulty in the measurement of quality with regard to libraries.

Natarajan, (2000) who was the Chairman of the AICTE until 2004, in his paper examines the nature and scope of quality and perception of quality. He has aptly explored the definition of quality when he emphasises that „Quality is not a destination but rather a journey to improvement“. He describes how an old Mafatlal advertisement proclaimed: “Quality needs no definition. You know it when you see it.”

Porter, (2003) insists that Performance measurement in a service which is associated with people must be more than just a collection of statistical data, although data collection will be a part of it. He has outlined various input, output and outcomes. The quality measurement plan includes collecting and analyzing statistical data and then converting it into general statements which will influence the decision making process of the library.

Naik, (2006) while explaining the Quality assurance system in higher and technical education states that Quality circle is a mechanism to involve all from bottom to top. Vision statement is essential. Solving problems is not the answer to improving quality. The solution lies in understanding the process, to identify the problems and continuously improving the process that gives rise to such problems.

Asogwa, Asadu and Ezeme,et.al.(2014) in their paper assess the quality of services to users in academic libraries in developing countries using ServQUAL model. The purpose was to expose the service areas where the desires of library users“ are not met, ascertain the causes, and suggest corrective measures. The paper revealed that in developing countries: all the service indicators evaluated were negatively marked. There is significant difference between the perceptions and expectations of library users; academic libraries are not satisfying users“ expectations.

Mane, (2015) in his paper on “NBA and NAAC Accreditation of UG Engineering Programmes/Colleges in India: A Review” studies the commonalities and differences between NBA and NAAC accreditation for engineering institutions in India. NBA accreditation for engineering institutions is more objective in nature and includes mapping and use of rubrics which is not called for in the NAAC process.

From the literature review, the most important facts that came to light were that increase in quantity of engineering institutions has sometimes diluted their quality. Accreditation is a measure of quality. But it is a fact that Quality goes beyond accreditation. Quality is not a destination but rather a journey to improvement. It was also deduced that the library is an important component of the Accreditation process of an engineering institution. However sometimes library performance measures do not always reflect service quality. Their focus is primarily on expenditures for resources rather than on delivery of service Libraries need to focus on and strengthen their efforts towards preparing to measure quality and achieve excellence.

4. NEED FOR THE STUDY

The need for the study has been visualized due to the following factors

4.1. Context of an engineering degree

It is perceived that engineering education is both knowledge oriented as well as job oriented. It is presumed that the quality of an institution that a student studies in will instinctively raise the level of quality of the individual and hence the scramble for seats to gain admission into “Bench-marked” colleges.

4.2. Mandatory Accreditation

The process of Accreditation is now mandatory for all institutions under A.I.C.T.E. Hence most engineering colleges are rushing to apply for Accreditation and do not have a step-by-step plan to follow. Some institutions deem in a tedious procedure while others consider that there is too much documentation involved and do not know where to begin.

4.3. Library a significant component of the institution

Since there are marks awarded to the engineering library in the Accreditation process, most librarians hasten to ensure that the minimum criteria of the AICTE is fulfilled with respect to books, journals and e-resources. Paradoxically it is in this rush for ensuring quantity that quality suffers the most.

4.4. Satisfaction of both information provider and receiver

An engineering institution involves a number of stake holders like students, teachers, parents, management, as well as governmental and regulatory bodies. In the context of accreditation of engineering college libraries, it is often seen that the satisfaction of two important stake holders librarian and users is not given due importance and their views are not taken into consideration.

5. OBJECTIVES OF THE STUDY

The objectives of the present study may be enumerated as follows

1. To study the process of Accreditation by the NBA in the context of engineering college libraries
2. To identify the various components of the process of Accreditation by the NBA in engineering college libraries in Mumbai
3. To test the impact of Accreditation on Collection development, Infrastructure, Staffing and Library services of engineering college libraries in Mumbai

6. LIBRARY INFRASTRUCTURE

The engineering college library occupies a strategic and important place on campus. In the context of engineering college libraries, it is seen that Library Infrastructure generally includes the following –

1. Library building
2. Display Area
3. OPAC browsing area
4. Circulation Counter
5. Stack Area
6. Reading Area and Reference Section

Various additional facilities, like carousels for research scholars, separate areas for project discussion, newspaper reading areas and, coffee break areas etc. can also be demarcated.

7. RESEARCH METHODOLOGY

A survey was conducted in order to ascertain the impact of NBA Accreditation on engineering college libraries in Mumbai. A detailed questionnaire was sent out to the librarians of various engineering colleges affiliated to the University of Mumbai. All the 66 engineering colleges that were covered in the scope were selected. The respondents were queried on various facets of the library infrastructure, library staff, library facilities, collection development, library products and services, value added services etc. The respondents were also asked about the impact of Accreditation on infrastructure, staffing, collection, library services and value-added services. The research included a thorough study of the College web-site as well as the Library Home page.

8. RESULTS OF THE SURVEY

The analysis of data received from the respondents has been presented in the following paragraphs through various tools like tables and graphs.

8.1. Responses obtained to the questionnaire

The questionnaires were sent out to 66 librarians of engineering college libraries in Mumbai. The table given below shows the details of the responses received by the researcher.

Table 8.1 Responses obtained to the questionnaire

Sr. No	Details of responses	Number of colleges	Percentage
1	Number of questionnaires distributed	66	100%
2	Number of responses received	60	90.91%

The data from the above table demonstrates that the researcher has distributed the questionnaire to 66 engineering college librarians and has received back the responses from 60 college librarians (90.91%). Efforts were made to collect the data from the remaining six institutes by contacting the librarians but due to various administrative problems the researcher could not get this data.

8.2. Accreditation Status

The researcher has tried to find out the Accreditation status of the various engineering colleges affiliated to the University of Mumbai from various sources – first from the DTE website, then from the Institutional web pages and finally from the librarian itself.

According to the Accreditation policy of the NBA, programmes from which atleast two batches of students have graduated, will be eligible to apply for Accreditation. By this policy, out of the 60 engineering colleges which had filled in the questionnaire and were selected for the study and the following is the result of the Accreditation status.

Table 8.2 Accreditation Status of engineering college libraries

Sr. No	Accreditation status	No of colleges	Percentage
1	Accredited	16	26.67%
2	Re-accredited	3	5.00%
3	Applied for Accreditation	3	5.00%
4	In process of applying	13	21.67%
5	Not applied	7	11.67%
6	Not eligible	18	30.00%
	TOTAL	60	100.00%

The above analysis shows that out 60 colleges which filled the questionnaire, 16 colleges (26.67%) were accredited, 3 colleges (5.00%) were re-accredited, 3 colleges (5.00%) had applied for Accreditation while 13 colleges (21.67%) were in the process of applying for Accreditation. Thus a total of 35 colleges (58.33%) have been through the process of Accreditation or are in the process of Accreditation.

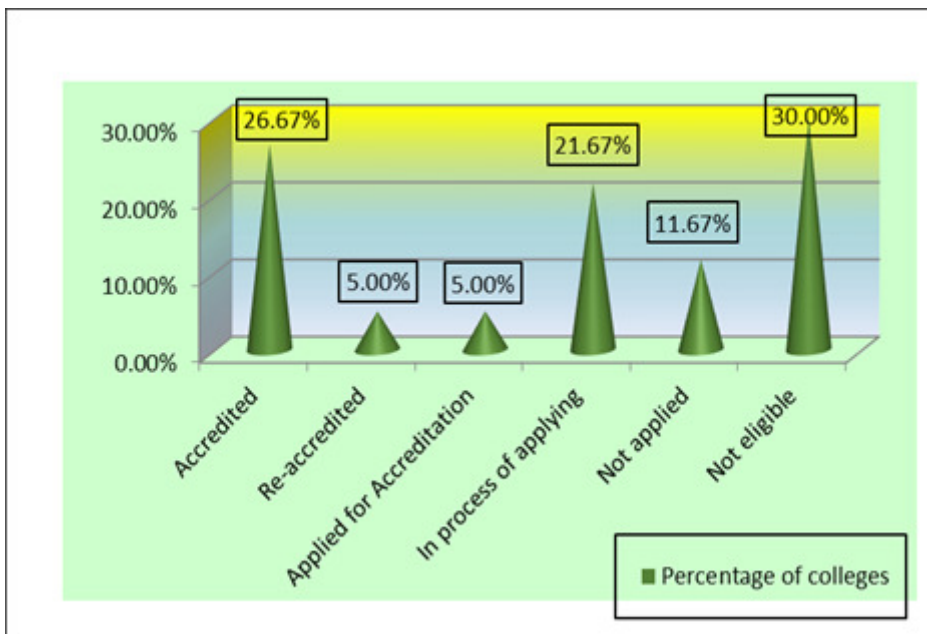


Figure 8.1 Accreditation status of engineering college libraries

Also 7 colleges (11.67%) have not applied for Accreditation and 18 colleges (30.00%) are not yet eligible to apply for the process of Accreditation as per the norms of the NBA since they were established later than year 2009.

The analysis of data obtained shows that a total of 35 colleges (58.33%) have been through the process of Accreditation or are in the process of Accreditation.

8.3. Impact of Accreditation on Library Infrastructure

The norms of the AICTE as well as the criteria of the NBA focuses on the infrastructure of the library as one of the important pre-requisites for developing a good library and catering to the information needs of the users. Library infrastructure includes area, computers, automation, Digital Library, Library services on Internet/Intranet etc.

The All India Council of Technical Education (A.I.C.T.E.) specifies the basic infrastructure required by an engineering college library at the time of the start of the Institution. The onus lies with the management of the engineering Institution, along with the librarian and the library staff to make adequate changes and provide additional facilities to accommodate the increase in intake or the divergence in services according to the changing times.

The respondents were queried with regard to area, furniture, computers and modern technologies. The analysis of data with regard to various parameters related to infrastructure development before Accreditation and after Accreditation shows the following impact as seen from the survey.

Table 8.3 Impact of Accreditation on library Infrastructure

Sr. No	Library Infrastructure	Number of colleges before Accreditation	Number of colleges after Accreditation	Increase in number of colleges
1	Adequate Area	25 71.43%	33 94.29%	8 22.86%
2	Adequate Furniture	28 80.00%	34 97.14%	6 17.14%
3	Sufficient Computers and ICT enabled tools	12 34.29%	34 97.14%	22 62.85%
4	Separate reference and project discussion areas	30 85.71%	31 88.57%	1 2.86%
5	Wi-Fi facility in the library	12 34.29%	28 80.00%	16 45.71%

The same can be depicted as follows

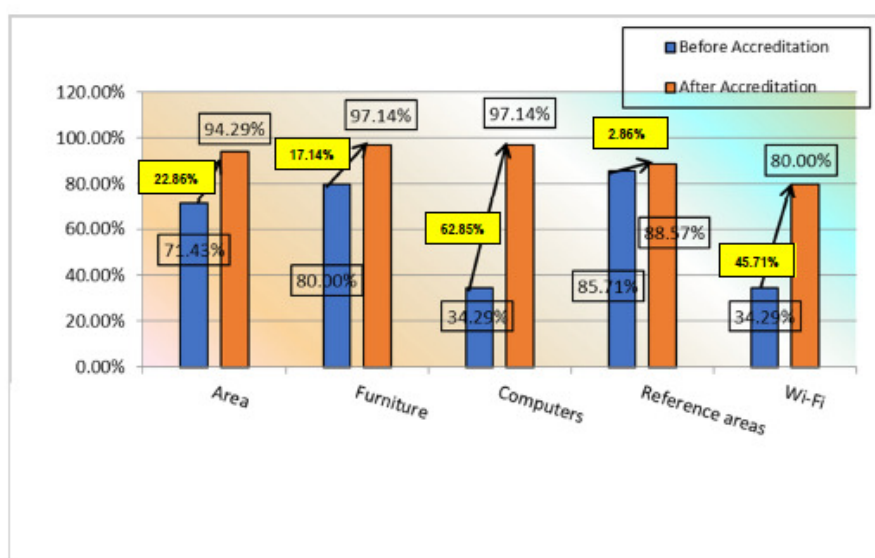


Figure 8.2 Impact of Accreditation on library Infrastructure

8.3.1. Adequate area for library use

In response to the ever pertinent global question of adequate area for libraries, the analysis shows that before Accreditation only 25 respondents (71.43%) had sufficient area for library use. After accreditation it was seen that 33 libraries (94.29%) had sufficient area for library use.

8.3.2. Adequate furniture with relation to the number of users

With regard to this, before Accreditation only 28 respondents (80.00%) had sufficient furniture with relation to the number of users. However after Accreditation it was seen that 34 libraries (97.14%) had procured adequate furniture.

8.3.3. Sufficient computers and ICT enabled tools for users

To this question relevant in the current ICT era, it is seen that before Accreditation only 12 libraries (34.29%) had sufficient computers to satisfy the information needs of an ICT literate information community. After Accreditation it was noted that 34 libraries (97.14%) had sufficient computers and ICT enabled tools for users.

8.3.4. Separate areas for reference, project discussion, enclosed carrels for scholars/research etc.

With a view to assisting researchers and supporting research, it is a common practice to demarcate separate areas for research scholars and reference work. To this end it was seen that before Accreditation 30 respondents (85.71%) stated that they had separate areas for reference work in their library. After Accreditation it was seen that 31 librarians (88.57%) had separate areas for Reference, Project discussion, enclosed carrels for scholars/research etc.

8.3.5. Wi-Fi facility available in the library

With regard to this user need and its advantages, before Accreditation only 12 engineering libraries (34.29%) had Wi-Fi facility in the library. However after Accreditation it was noted that 28 librarians (80.00%) had made Wi-Fi facility available in the library.

9. FINDINGS OF THE STUDY

The following are the findings of the study

1. It is often seen that Accreditation accelerates the sanction of additional area and infrastructure so as to comply with the AICTE norms. Before Accreditation only 25 respondents (71.43%) had sufficient area for library use. After 33 libraries (94.29%) had sufficient area for library use.
2. Before Accreditation only 28 respondents (80.00%) had sufficient furniture with relation to the number of users. After Accreditation 34 libraries (97.14%) had procured adequate furniture.
3. Before Accreditation only 12 libraries (34.29%) had sufficient computers. After Accreditation now 34 libraries (97.14%) had sufficient computers and ICT enabled tools for users.
4. Before Accreditation 30 respondents (85.71%) stated that they had separate areas for reference work in their library. After Accreditation it was seen that 31 librarians (88.57%) had created such enclosed areas.
5. Before Accreditation only 12 engineering libraries (34.29%) had Wi-Fi facility in the library. After Accreditation a majority of 28 librarians (80.00%) had made Wi-Fi facility available in the library.

10. SUGGESTIONS

The findings following the study have put forth certain concerns which need to be dealt with in a systematic manner for better performance of the library. Based on the findings of the research survey, the following suggestions have been made in order to improve the overall conditions of engineering libraries and pave the way for quality libraries

1. Library staff of engineering colleges should prepare for Accreditation, well in advance, with proper filing, documentation and generation of reports as may be required by the governmental committees.
2. Engineering college libraries should strictly adhere to the norms of the AICTE with regard to the library infrastructure.
3. It is suggested that the engineering college libraries be provided with sufficient space in keeping with the norms of the AICTE. Sufficient space should be allocated for reading, group discussions and research scholars.
4. It is recommended that librarians look at Accreditation as an opportunity to fortify the infrastructure in the library so as to provide better facilities to its users.
5. The college authorities should, at such times, provide guidance and support and sanction additional funds for library infrastructure in keeping with the norms of the AICTE and the needs of the users.
6. With regard to library area, although it is understood that space is a constraint in urban areas, yet it is suggested that the college authorities sanction atleast the minimum required area for the library.
7. It is suggested that sufficient infrastructure, in the form of required furniture, computers, Wi-Fi facility and other ICT tools be provided to users so that their library visit should be stimulating and encouraging.

11. CONCLUSION

The analysis of data showed that most engineering college librarians in Mumbai had been through the process of Accreditation or were in the process of applying for Accreditation. They were therefore aware of the importance and depth of Accreditation.

Most engineering college librarians believed that the process of Accreditation by the NBA had a positive impact on the various components of the library especially the library infrastructure.

The present research study is very useful for librarians and library staff of various engineering college libraries since it explains the impact of accreditation on engineering libraries.

It is also useful to the administrators, the management of these colleges and those involved in the funding for various aspects of the libraries. The study implies that quality is a continuous journey that will need support and funding from time to time.

Against the background of all this it is hoped that this study will contribute towards enhancing the positive aspects of the process of Accreditation in engineering college libraries. It anticipates a more pro-active role for the engineering college librarian to concentrate their efforts towards building a 'Quality Library' and thus pave the way towards 'Pathway to Excellence' in the information arena.

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