

Students' Satisfaction across 5C's in NBA Accredited Engineering Colleges in Bangalore

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Abstract:

In the present era of knowledge driven economy, the role of higher education becomes instrumental in the overall socio-economic development of any country. According to WTO, under the provisions of the GATT, the sale and purchase of education is considered as service. Higher education can be classified as a marketable service as it possesses all the characteristics of a typical service industry – intangible, heterogeneous, perishable, inseparable from the person delivering it and high customer (student) contact. Educational institutions should take efforts to provide the services effectively and efficiently which would result in satisfaction of students (Kerlin 2000). In this context, an attempt was made to study the students' satisfaction, attitude, and behavioural outcome towards NBA accredited engineering colleges in Bangalore.

Introduction:

Institutes offering engineering educations are increasing at a very fast rate to meet the ever increasing global demand for engineering graduates. A significant raise in the enrolment level of engineering institute is seen since the year 2006. The AICTE report (2013) on the growth of students' intake stresses on over three times increase in the last seven years. It is a matter of greatest concern for all stakeholders whether education provided by these engineering institutes is of a quality that is acceptable to the industry and whether the graduate engineers have acquired the necessity skill set to be employable in the job market. There are reports of graduate engineers struggling for the employment in the global workforce market. Hence there is an urgent need for addressing the issue of quality in higher education.

Mushrooming of engineering institutions for the sake of encashing on the growing aspirations of the citizens has led to severe deterioration in the quality of teaching learning process over the years. Quality is not an event; it's a continuous process and a relentless pursuit to achieve academic excellence. It's an ongoing, dynamic and lifelong endeavour of an institution.

The NASSCOM (National Association of Software and Services Companies) in its perspective 2020 report (2008) stressed on the four major challenges such as employability, infrastructure, favorable policies, and competition from other low cost countries. "There is a strong correlation between a country's competitiveness and quality of higher education provided within the country" says Borahan and Ziarati (2002).

It was reported that 26% of employable engineers in technology services continue to be a hold up. Hence it became imperative for institutes offering higher education to take measure for improving and continuously upgrading and evaluating the quality of their education services. As customer's judgment of the quality of industrial products in the context of the business environment is very crucial, the same could be said of the students who are the recipient acquiring knowledge and information services in the academic context and are the one who should measure the quality of output, according to Ziari,(1995). This study is mainly focusing on the importance of engineering education, TQM in higher education and the TQM model of the academic excellence which has been applied for the current research.

ENGINEERING INSTITUTIONS IN INDIA						
YEAR	NUMBER OF INSTITUTIONS	% GROWTH OF NUMBER OF INSTITUTIONS	TOTAL INTAKE SEATS (IN MILLIONS)	% GROWTH OF TOTAL INTAKE SEATS	TOTAL STUDENTS INTAKE (IN MILLIONS)	% GROWTH OF TOTAL TO TAL STUDENTS INTAKE (IN MILLIONS)
2008-09	0.84	2,388	30%	1.75	25%	23%
2009-10	1.07	2,972	20%	2.25	22%	21%
2010-11	1.31	3,222	8%	2.87	22%	18%
2011-12	1.48	3,393	5%	3.16	9%	11%
2012-13	1.76	3,495	3%	3.44	8%	16%
2013-14	1.8	3,887	10%	3.62	5%	2%
2014-15	1.9	4,276	9%	3.85	6%	5%

Source: All India Council for Technical Education, Approval process handbook(2015-16)

Literature review:

G. Janardhana, Dr. Mamilla Rajasekhar (2016), it intent to reveal on the word service that is related to a task accomplished through human effort to provide assistance to the needy. In the higher education sector, it is difficult to manage the institutions from the marketing point of view because the concept of customer has not been clearly defined. Students are the “customer” of a university, but it is suggested that viewing student as customers creates some tensions as universities seem to be too aligned with business. Developing customer (student) satisfaction at universities level is crucial. If this is achieved, it will facilitate realisation of the strategic objectives of the university more effectively. The higher education sector ensures quality of the educational process with the help of accreditation agencies established for the purpose. The main agency which accredits university and colleges in general education is the National Assessment and Accreditation Council (NAAC) established on 16th September, in 1994, under section 12 (ccc) of the UGC Act of 1956, whereas such accreditation for technical education is done by the National Board of Accreditation (NBA) set up by AICTE in 1994, and for agricultural education by National Accreditation Board (NAB) set up by ICAR in 1996.

A.M.Basheer Al-Alak (2009), this study assessed overall business student’s satisfaction perceptions from the higher education institutions in Jordon and investigated the differences in satisfaction perceptions of business students from three public and three private universities. The results of this study that business colleges at private universities are really competing well and even well ahead of business colleges at government universities in delivering services and other related outputs. Business students at private universities perceive higher quality services than their counterparts at public universities and are much more satisfied with such services compared to business students at public universities. It is quite evident that business colleges at private universities are differentiating themselves by delivering consistently higher quality services than business colleges at public universities.

Prem Vrat (2008), this paper distinguishes the quality related issues in Higher Technical Education in India because of exponential development in the number of schools and understudies enlisted in most recent 15 years. This has brought about debasement of value especially due to intense lack of the gifted workforce assets. In this way, it recognizes accreditation as a quality upgrade methodology posting the troubles and issues connected with the National Accreditation forms through NAAC and NBA. It proposes an option defeat through National Quality Award Model, which can be utilized with the end goal of accreditation, as well as joins benchmarking, self-evaluation and associate appraisal. As a particular instance of UP Technical University Academic Excellence Model being executed in UPTU. It portrays the point by point model structure and its organizations and conceivable utilization of the model to improve the quality is sketched out.

Viswanadhan and Rao (2005) in their study took factors such as commitment of top management and leadership, customer focus, course delivery, communication, campus facility, congenial learning environment and continuous assessment and improvement as variable in their study and analyzed the impact of privatization of engineering education through the performance of undergraduate engineering programs in India.

Sohail and Shaikh, (2004) identified six factors, such as contact with personal, physical environment and reputations and responsiveness, excess of facilities and curriculum, which

contributed to their expectations towards quality business educations while exploring Students expectations of quality in Business Education.

Sahney et al (2004), asserted that quality of education is all in fussed covering the various aspects (ex: Quality of inputs in the form of students, faculty, staff and infrastructure) of academic life. **Jenssen et al (2002)**, affirmed the role of students satisfactions approaches that could prove to be a tool for bridging traditional and academic views on how to improve higher education. **Mergen et al (2000)**, proposed a three components model of Quality Management; quality of design (QD), Quality of Conformance (QC) and Quality of Performance (QP) to identify the opportunities for improvement in research, teaching and operations.

According to authors **Hamersley and Pinnington (1999)**, quality in education is a systematic and rationalized philosophy for quality and change management in higher education. The four principles- delight the customer, management by fact, people - based management and continuous improvement was proposed by **(Kanji, 1998)**, as a business excellence model for higher education. **Elmulti et al (1996)**, emphasized the management philosophy to successfully managed a complete organization that excels in all dimensions of its operations. Lewis and **Smith (1994)**, further specified the benefits of the concepts and principles to higher education's institutions. **Varva (1997)**, accentuate s that customers satisfactions is leading criterion for determining the quality actually delivered to customers. Educations institutions are vital for fostering future human resources equipped with knowledge and skills sets that are required in the job market. These institutions that are both public and private compete with each other to attract more students and achieve good results. So it is a mandate for these institutions to provide higher education's and continuously improve the quality of their educations delivery and satisfy the individual who have strong interest in seeking quality educations.

Research gap:

The study focuses on understanding the students' satisfaction in NBA accredited engineering colleges in Bangalore. Most of the studies were emphasized on all colleges in general, very few studies are there on NBA accredited engineering colleges. No research was undertaken in Bangalore for the said area; hence it is an attempt in that direction.

Objective:

➤ The main objective is to assess the students' satisfaction across 5C dimensions () in NBA accredited engineering colleges in Bangalore

Methodology:

Primary data was collected from 320 undergraduate engineering students in accredited colleges in Bangalore. Respondents were chosen based on simple random sampling. Reliability of the questionnaire was tested after pilot study using cronbach alpha. Collected data was analyzed using various techniques viz. ANOVA, Correlation, Regression, Gap Analysis etc. Present study on students' satisfaction is limited to NBA accredited colleges in Bangalore. Study is confined to students' opinion, satisfaction etc. Employers, Management and Teachers opinions are not the subject matter of this study.

Analysis and Interpretations:

Table - 1: Correlation across 5C dimensions and input, process & output

	1	2	3	4	5	6	7	8	9	10
1.SATIS	1									
2.COMMIT	0.43*	1								
3.DELIVER	0.46*	0.83**	1							
4.CAMPUS	0.56**	0.77**	0.76**	1						
5.CURTSY	0.48*	0.8**	0.82**	0.83**	1					
6.FEDBAC	0.52**	0.78**	0.79**	0.78**	0.85**	1				
7.CHOIC	0.24*	0.47*	0.43*	0.51**	0.50**	0.51**	1			
8.INPUTS	0.57**	0.54**	0.54**	0.64**	0.64**	0.62**	0.51**	1		
9.PROCES	0.62**	0.58**	0.58**	0.58**	0.64**	0.58**	0.48*	0.86**	1	
10.OUTPUT	0.56**	0.57**	0.51**	0.62**	0.61**	0.55**	0.46*	0.81**	0.83**	1

**P<.01 * P<.05

An analysis of the above table brings out that:

- Commitment of top management was found to have positive and significant (at 5% level) correlation with Satisfaction. Course Delivery was found to have positive and significant (at 5% level) correlation with SAT and positive and significant (at 1% level) correlation with Commitment of top management.
- Campus Facilities was found to have positive and significant (at 1% level) correlations with Satisfaction, Commitment of top management and Course Delivery. Courtesy was found to have positive and significant (at 1% level) correlations with Commitment of top management, Course Delivery and Campus Facilities and positive and significant (at 5% level) correlation with SAT.
- **Customer Feedback:** This factor was found to have positive and significant (at 1% level) correlations with Satisfaction, Commitment of top management, Course Delivery, Campus Facilities and Courtesy. Choice was found to have positive and significant (at 1% level) correlations with Campus Facilities, Courtesy and Customer Feedback & positive and significant (at 5% level) correlations with Satisfaction, Commitment of top management and Course Delivery.
- **INPUT:** This parameter was found to have positive and significant (at 1% level) correlations with Satisfaction, Commitment of top management, Course Delivery, Campus Facilities, Courtesy, Customer Feedback and Choice. Process was found to have positive and significant (at 1% level) correlations with Satisfaction, Commitment of top management, Course Delivery, Campus Facilities, Courtesy, Customer Feedback and Input and positive and significant (at 5% level) correlation with Choice. Output was found to have positive and significant (at 1% level) correlations with Satisfaction, Commitment of top management, Course Delivery, Campus Facilities, Courtesy, Customer Feedback, Input and Process and positive and significant (at 5% level) correlation with Choice.

Findings:

- The study confirms that there was a relationship between the parameters used by the students to choose the institution and facilities provided to them.
- The study confirms that there was a relationship between the INPUT parameters used by the students to choose the institution and facilities provided. It was same with process also.
- The study reveals that gender, age, monthly income and native, output has linear relationship (as the signs between the variables are also expected). Present survey also clears that input, output has linear relationship and with input, process has linear relationship.
- The research analysed the relation between set of predictors and dependent variable. College type is significant between Aided and Pvt. Campus facilities are significant. Customer feedback is significant at 1% level. All other variables are not significant. In precise, campus facilities and customer feedback have high influence on satisfaction.

Conclusion:

Present research findings clearly lead to a conclusion that, though the colleges are accredited by NBA, there is a gap between students' expectations and satisfaction. Present parameters used by NBA needs to be much more exhaustive.

Suggestion:

- Accredited engineering colleges in Bangalore need to consider expectations of students and design the academic calendar to satisfy them.
- Students are giving more importance to campus facility; hence college management must provide good infrastructural facilities to students.

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