



## Factors Influencing Quality Management Practices in Perception of Engineering Students

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### ABSTRACT

*The word Quality has been deeply rooted in people that it attains different meaning in varying context. Engineering Education sector which embraced Quality before two decades in India has currently different types of framework to adopt Quality and its certification viz., NBA, NAAC, ISO 9001:2008 and so on. Particularly students' way of attributing quality will be different from faculty, public and others. The way teaching learning process is expected by the auditing or inspecting agencies are different from the way it is implemented. Engineering as a profession demands core attributes such as problem solving abilities, analytical skills, communication skills, interpersonal skills, decision-making skills and the new millennium imposes additional demands such as learning ability, lifelong learning, skill to work in a team, creativity, innovation, integration skills, ability to master knowledge from neighboring disciplines, communication to sustainable development. Students are the direct beneficiary of Quality management practices.*

*This study is significant for the below reason:*

- GARRETT ranking is used to rank which factor influencing Quality management and it is resulted that Academic activities & Image of the institution and Infrastructure facilities available inside the campus are the factors influencing Quality Management among engineering college students, which will make the researchers and other people to know exactly about one of the factors which affects quality management among the students.

**KEYWORDS : Engineering students, Quality, teaching learning process**

### INTRODUCTION

Quality management is considered as the value and a quality for engineering education, it also considered in student perspective and students view of point. Most of the engineering colleges are maintained by a business oriented mind not even followed an education and service mind. Many do research on a huge array of area related to quality management and service quality, TQM, and work in education environment and teaching learning process & cost based system.

### CONCEPTUAL OUTLINE

Hackman and Wageman (1995) advocated that, total quality management (TQM), if properly implemented, can enable organizations to dynamically provide cope with their ever changing environments in a sustainable manner. Hammersley and Pinnington (1999) suggested TQM to be a systematic and rationalized philosophy for quality management as well as change management in higher education. Besterfield et al. (2003) defined the three words comprising the abbreviation TQM: "total" refers to made up of the whole; "quality" refers to the degree of excellence of a product or service; and "management" refers to an act, art or manner of handling, controlling, leading and planning. TQM in higher education implies improving the quality of courses, input instructional process, source management processes and structures, student support service output and linkages with the world of work and other organizations (Tulsi, 2001). The model supported by TQM proponents (Lagrosen et al., 2004; Venkatraman, 2007) in education emphasized on customer satisfaction and continuous improvement. In this study, Quality Management practices in perception of engineering college students has been construed as an approach that enabled focused attention on the core activities (e.g. teaching and learning methodology, curriculum revision and resource development) of the university, while improving the overall quality of its processes (e.g. continuous improvement, student academic growth and enhancement of institution's reputation) in order to achieve sustainable institutional outcomes and stakeholders' satisfaction.

### FEW COLLECTED WORKS OF PREVIOUS RESEARCH

Begum sayeda, chandrasekharan rajendran and prakash sai lokachari, total quality management in engineering educational institutions of india, an international journal vol.17 no.5,2010 page number 728 – 767. The aim of this paper is to explore the adoption of quality management practices in engineering educational institutions (EELs) in India from management's perspective. The research objectives of this work are formulated from the perspective of the service provider

(i.e. management) of the EELs, and they pertain to identifying the critical dimensions of TQM in EELs and developing an instrument using the critical dimensions; Multiple regression analysis was undertaken to study the effect of the TQM dimensions on each of the measures of performance indexed in this study to measure the organizational outcome, i.e. institutional effectiveness. Findings highlight 27 critical factors/dimensions of quality management, which analyzed the relationship between TQM dimensions and institutional performance, which has been formulated using five dimensions. The conclusion of this study in Positive and significant relationships among the TQM dimensions and institutional performance have been observed.

Sangeeta sahney, d.k.banwetand s.karunes, conceptualizing total quality management in higher education, the tqm magazine vol 16, no 2 -2004 pp- (145-159). The aim of this paper is education system as a transformation process and then moves on to identifying the customers of the higher education system. Education as a transformation and production process. TQM and quality educations are applied in this study. Simple Random methods only used of this research. The conclusion of this paper in TQM focused primarily higher education institutions.

Choon ling kwek, teck chai lau and hoi piew tan, educational quality process model and its influence on student's perceived service quality, international journal of business and management vol.5, no.8, august 2010. The aim of this research is to investigate the determinants of students' perceived service quality for a private higher education institution in Malaysia, based on the process model of education quality. A total of 458 undergraduate business students from a private university in Malaysia participated in this research. Alternate Hypotheses used in this research. Questionnaires are used the data collection methods. Multiple regression analysis was carried out to test the hypotheses that were identified. The research findings and contributions have brought some implications to various stakeholders. The implications can be divided into two different categories: theoretical implication and managerial implication. The research setting conclusion by incorporating more private higher education institutions and drawing more respondents who are enrolled in various undergraduate degree programmes may be able to enhance the validity and generalization of these research findings.

### INTENTIONS OF THE STUDY

The intentions of the study are to,

To study various factors influencing Quality in Engineering Colleges.

To analyze the relationship between students demographics and the influencing factors.

**METHODOLOGY**

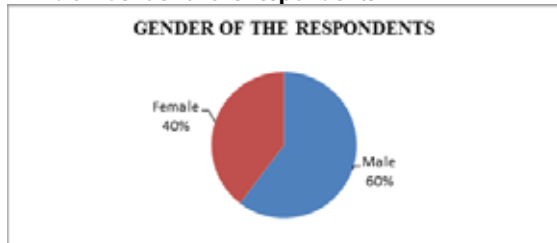
The study is exploratory in nature. Survey method was applied and the study is directed amongst engineering college students at Salem City, Tamilnadu. The respondents for the study are confined to 5 college students. Proportionally convenience sampling technique was adopted.

**INVESTIGATION AND INTERPRETATION**

**Table 1: Classification on the basis of Gender**

| Gender                                                | Numbers | Percentage |
|-------------------------------------------------------|---------|------------|
| Male                                                  | 139     | 60.4       |
| Female                                                | 91      | 39.6       |
| Total                                                 | 230     | 100.00     |
| Source: Computed and calculated through questionnaire |         |            |

**Exhibit 1 Gender of the respondents**



**Interpretation:**

It could be observed from the above table 60.4 %(139) of the respondents were male and remaining 39.6 %(91) of them are female. Thus the majority of the respondents were male

**Chi Square Test**

There is any significant different Father's income and Tuition fees, Living Cost.

H0: There is no significant different Father's income and Tuition fees, Living Cost.

H1: There is significant different Father's income and Tuition fees, Living Cost.

**Tuition costs \* Fathers Monthly Income**

| Table:2 Chi-Square Tests |                    |    |                       |
|--------------------------|--------------------|----|-----------------------|
|                          | Value              | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square       | 4.527 <sup>a</sup> | 8  | .807                  |
| Likelihood Ratio         | 4.280              | 8  | .831                  |
| N of Valid Cases<br>230  |                    |    |                       |

**Living costs \* Fathers Monthly Income**

| Table 3: Chi-Square Tests |                    |    |                       |
|---------------------------|--------------------|----|-----------------------|
|                           | Value              | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square        | 6.810 <sup>a</sup> | 8  | .557                  |
| Likelihood Ratio          | 6.871              | 8  | .551                  |
| N of Valid Cases<br>230   |                    |    |                       |

**Interpretation**

| Variables                              | Chi – Square Value | Significant     |
|----------------------------------------|--------------------|-----------------|
| Tuition costs * Fathers Monthly Income | .807               | Not Significant |
| Living costs * Fathers Monthly Income  | .557               | Not Significant |

**CONCLUSION:**

The present study made an attempt to develop and explore the critical constructs of Quality management in Engineering Education from the student's (service provider) perspective. It is seen that the Quality management factors dimensions significantly influence all the measures of performance of the institution, which have a significant bearing on institutional effectiveness. The individual dimensions which result in each of the particular measure of institutional performance is highlighted for the purpose of reflection for the service provider to concentrate more on each of the performance areas for improvement. Some important observations and concerns from the student's perspective are also highlighted and they pertain to developing vision, commitment of resources for launching quality management initiatives and process development.

**FURTHER RESEARCH**

The future scope for the current study can be supported further on "Factor Influencing Quality Management Practices in perception of engineering faculty members".

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