Total Quality Management (TQM) in Education-in (Arts and Engineering Colleges) Madurai

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Abstract

This paper aims to present the perception of regarding Total Quality Management (TQM) in education. It is an attempt to understand how these perceptions vary by demographic variable such as, gender & subject specialization (Arts and Sciences and engineering colleges). Data were collected from 50 colleges in conceptualization of used 14 points lickers scale for Total Quality Management (TQM) in Education and were analyzed using SPSS version 14.0. Analysis of Variance (ANOVA) was employed to find out the significance of difference between variables subscales. Significant difference was found between male and female professors in the perception of total quality management. Female professors had higher mean score than male professors there is no significant difference between Arts and Sciences college professors in the perception of TQM in education.

Introduction

Quality is the inspiration for transcendence from the mundane to the higher realms of life. It is the source of craving behind the unfolding human civilization through ages immemorial. Yet it has successfully eluded the dragnet of definitions proving the inadequacy of human intelligence. Quality stares at you. You recognise it. But you cannot define it. Any length of description of the anatomical details of a fragrant and beautiful flower- its petals, colour, shape, size, fragrance, softness, all put together- falls short of conveying its beauty fully. Quality lies in the perception of the consumer. What is "great" for one may not be good enough for another .There are various well-known definitions of quality. Crosby defines quality as "conformance to requirement" while Juran and Gryna define quality as "fitness for use". Deming defines quality as "a predictable degree of uniformity and dependability at low cost and suited to the market". It is more towards quality in operation. Many organisations found that the old definition of quality, "the degree of conformance to a standard", was too narrow. Consequently, they used a new definition of quality in terms of "customer focus". It is reported that many companies had initially concentrated all their efforts on improving internal processes with little or no regard for the relationships between those processes and the organisation's ultimate customers.This failure to include the customer focus had resulted in companies struggling hard to survive.

In the context of higher education, due to the intangible nature of its processes, there is a considerable discussion on the notions of educational quality. Fincher describes

how quality perspectives have evolved in education over the years by going through a shift from experience to technique, style and finally to process. Harvey and Green in their seminal work point out that quality is a relative concept. Instead of having a single definition of quality, Harvey and Green provide five discrete but interrelated notions of quality. Quality has a variety of meanings and its range of meanings does cause confusion, as each individual's perception of quality differs.

There are a number of researchers who have formulated frameworks for quality improvements. These frameworks are entitled as Continuous Quality Improvement (CQI), Strategic Quality Management (SQM) or Total Quality Management (TQM). Even though there might be some differences among these approaches, the term TQM is considered to be more general to capture the essence of quality improvements. TQM has been defined as a strategic architecture requiring evaluation and refinement of continuous improvement practices in all areas of usefulness. Corrigan gives a definition with an emphasis on customer satisfaction: that "TQM is a management philosophy that builds a customer-driven, learning organization dedicated to total customer satisfaction through continuous improvement in the effectiveness and efficiency of the organization and its processes". According to Kaufman, total quality management provides what is required as judged by the client. It is accomplished through everyone in the organization being committed to achieve results, a passion for quality and decisions based on performance data. TQM emphasizes that it is important for all elements to fit together to turn raw materials into the products and deliverables that satisfy clients. Customer satisfaction is the result most addressed by TQM. Some one person describe the basic tenets of TQM which are as follows: "long-term perspective, customer focus, and top management commitment, systems thinking, training and tools in quality, increased employee participation, development of a measurement and reporting system, improved communication between management and labour, and continuous improvement". It can be seen from the above definitions that TQM describes two main notions: 1. Continuous improvement and 2. The tools and techniques/methods used. In general, TQM encompasses many management and business philosophies and its focus gets shifted, based on the scenario where TQM is applied. Whether it is in industry or higher education, TQM philosophy revolves around the customer.

TQM in education surfaced in arts and science colleges, applied Total Quality concepts in his classes. TQM has become increasingly popular in education. TQM has also spread into mainstream of educational organisations. In support of the TQM initiatives in education, The model to suggest a practical strategy for using TQM principles in education. Their strategy focused on the quality of the teaching system used rather than on students' examination results. They argue that examinations are a diagnostic tool for assuring the

quality of the teaching system. To satisfy the educational needs of students, continuous improvement efforts need to be directed to curriculum and delivery services. From such a perspective, various root causes of quality system failure in education have been identified. These include poor inputs, poor delivery services, lack of attention paid to performance standards and measurements, unmotivated staff and neglect of students' skills. One of the weaknesses of such a perspective is in its concentration on the student as a customer whereas TQM in education should concern the customer beyond students. Literature available, points to a growing interest in applying TQM in education and for a wide variety of reasons. Some of the reasons include: pressures from industry for continuous upgrading of academic standards with changing technology; government schemes with allocation of funds, which encourage research and teaching in the field of quality; increasing competition between various private and government academic institutions; and a reduction in the pool of funds for research and teaching, implying that only reputable institutions will have a likely chance of gaining access to various funds.

The TQM framework should be built upon a set of core values and concepts. These values and concepts provide foundation for integrating the key performance requirements within the quality framework. A set of fundamental core values forming the building blocks of the proposed TQM framework is : Leadership and quality culture; continuous improvement and innovation in educational processes; employee participation and development; fast response and management of information; customer-driven quality and partnership development, both internally and externally. A quality circle consists of small groups of people that meet on a regular basis to discuss problems, to seek solutions, and to cooperate with management in the implementation of those solutions. Quality circles utilise organised approaches to problem solving and operate on the principle that employee participation in decision-making and problem solving improves the quality of work. In education, quality deals with monitoring and identifying the areas that affect the levels of teaching. The roles of the six core elements of a TQM framework are described as follows:

The past few decades were considered with pioneering work on educational leadership. The leadership component deal with examining senior management personal of leadership and involvement in creating and sustaining a customer focus, clear goals, high expectations and a leadership system that would promote performance excellence. It also examines leadership system and policies internally that would impact staff and students and public responsibilities, establishing partnerships with industry, parents, and general community externally. Improvements in leadership effectiveness could be achieved through a participative management style that includes inputs from a comprehensive 360-degree feedback system from these internal and external stakeholders. The strategic planning of this element would examine how the institution sets strategic directions and how it

determines key plan requirements with a primary focus on customer satisfaction. This element examines the key aspects of process management, including learner-focused education design, education delivery, services and business operations. It examines how key processes are innovatively designed, effectively managed and continuously improved. The performance results of this element would examine student performance and improvement using key measures and indicators. This element examines how staff development and training is aligned with the institution's objectives. It would also examine the efforts to build and maintain a climate conducive to achieve performance excellence, full participation and organisational growth. Some of the strategic thrusts of this element would be on manpower development such as staff recruitment, training and career development, staff performance and recognition and quality work environment. The information management element should examine the management and effectiveness of the use of data and information to support overall mission-related performance excellence. It should ensure reliability and accessibility of the necessary key information required for day-to-day operational management. It would also focus on making analysis of facts and information and respond to situations in a fast and effective manner. This element examines how the institute determines the needs and expectations of students and stakeholders. It would include determining different performance measures and how the targets could be achieved. Some of the performance measures could be based on student satisfaction surveys, student forums and dialogue sessions, industry needs and satisfaction surveys and evaluation of teaching and learning effectiveness. This element should examine how partnerships at various levels, internal and external could be established. Effective leadership, good education management, efficient human resource management and versatile information management would definitely help in managing dynamic relationships with internal and external stakeholders. Implementing this proposed TQM framework involves complex and inter-related educational business processes. This would encompass various dimensions of quality, including corporate collaboration, information responsiveness, teaching and non-teaching facilities/resources available, teaching and evaluation practices and the type of courses offered. But it is important to observe that all six core values and elements of the proposed TQM framework have an obvious customer focus with an emphasis on customer satisfaction and continuous improvement. Realizsng these six core values and elements is to identify the core educational business process, namely teaching and student learning, that provides the main vehicle for achieving customer satisfaction and quality improvements. Hence, it is important to focus on the TQM issues related to teaching and how continuous improvement provides the necessary foundation.

Need for the Study

Defining quality in education is a massive challenge since it deals with the most sensitive creation on earth –the human being. Industrial products are finished goods- take them or leave them. Nothing can be done once they are finished. Service is here and now. You can look for better quality only next time. Education has no such finished product, nor even the graduates. They are on the way "to be". Education only charges the human propensities to evolve and unfold it till the last breath, a process that covers the human journey from 'womb to tomb'. Human beings continue to learn, and evolve, 'to be'. Education is goal-oriented. Accordingly, quality of education has been seen with reference to excellence in education, value addition in education, fitness of educational outcome and experience for use, conformance of education output to planed goals, specifications and requirements, defect avoidance in education process and meeting or exceeding customer's expectation of education. 'I shall suppose that education is concerned with the development that of minds of the pupils; colleges produce educated persons who, by virtue of their colleging, to be construe? Commitment to quality makes student proud to learn and work hardly for improvement. Quality improvement is a never ending process. Education quality leads to a prospective future. Hence, insight on quality indices and virtual implementation need to be given top priority and due attention should be paid to the category in the wide range of educational strata e.g. colleges, university, educational management, and the staff.

Objectives

- To study the difference between Male and Female colleges professors in the level of perception regarding TQM in education.
- To study the level of perception of arts and sciences colleges in Madurai district, regarding TQM in education.
- To study the difference between Arts and Science and engineering colleges professors in the level of perception regarding TQM in education.

Hypotheses

- There is no significant difference between Male and Female in art and sciences professors in the level of perception regarding TQM in education.
- There is no significant difference between Arts and Science and engineering professors in the level of perception regarding TQM in education.

Methodology

Sample

A total of 50 professors were selected from 20 colleges. Teachers were randomly selected. Randomly, 20 colleges were selected from total 61 colleges in Madurai. All the professors of Science subject and Arts subject selected colleges and 20 engineering colleges were considered as sample for the study. Thus, the sample for the study consisted of 50 professors of both the colleges.

Tools

Survey Instrument of Bonstingle (1992) was used to get the data on perception of college professors regarding TQM in education. The original form of this tool consisted of 84 items based on Bonstingle's conceptualisation of Demming's 14 points of Total Quality Management (TQM) in Education. All the items under 14 points are to be rated by the sample respondents on 4- point Likert's scale having the ratings of " Not applicable"(0), Low (1) Medium (2), and "High" (3). In this study, 6 out of 14 points of Deming consisting of only 30 items were considered because they were very much related to colleges programmes, professors teaching and student learning. They were 1. Create constancy of purpose, 2.Adopt new philosophy, 3. Improve constantly, 4. Institute training on the job, 5. Institute leadership, 6. Drive out fear, so that everyone may work effectively for the institution.

Procedure

The selected college professors were met individually for explaining purpose of the study and were instructed how to respond to the scale survey instrument of Total Quality Management in Education. Further clarifications were offered on the questions/doubts raised by them.

Statistical Analysis

The scales were scored as indicated above and the data obtained were subjected to statistical analysis using SPSS for windows (Evaluated Version 14.0). Mean and SD were calculated separately for all the 4 points in the scale and the total scale to describe the level of perception of college professors regarding TQM in education. The study employed "t" test for significance of difference between means to test the hypotheses formulated for the study. Considering the possible range of total scores on TQM questionnaire (0 to90), the sample teachers were categorised into 3 groups: AA (Above Average), A (Average) and BA (Below Average) in perception about TQM in education. For this purpose, the total possible score 90 was divided equally into 3 groups: Teachers scoring between 0-30 as Below Average, 31-60 as Average and 61-90 as Above Average. The details of the number and

percentage of teachers of 3 categories were: AA (No.38 and 24.3%) A (No.87 and 55.8%) and BA (No. 31 and 19.9%). The study employed "t" test to find out the significance of difference in the perception about TQM in education between difference categories of professors, Male and Female, Arts and Science and engineering college professors, in Madurai District. SPSS for Windows (version 14.0 was used for statistical analysis.

Results

Results indicated that more than 50% art and science professors (58.2%) exhibited Average level of perception about TQM in education. However, the percentage of engineering professors with Above Average level of perception about TQM was more (24.3%) than that of professors with Below Average level of perception about TQM (19.9%). According to the first null hypothesis "There is no significant difference between Male and Female art and science college professors in the level of perception regarding TQM in education". The obtained results taken by SPSS 14 indicated that, there was significant difference between female and male professors in the perception of TQM (t = 2.11 significance of 0.03 level). The observation of means between male and female professors indicated that the mean score of female professsors (mean = 1.76) was higher than that of male professors (mean= 1.63). It is concluded that female professors have better perception than male professors regarding TQM in education. Thus, rejecting the null hypothesis, it is inferred that, there is significant difference between male and female professors in the perception about TQM in education. **T**he second null hypothesis stated that "There is no significant difference between Arts and Science colleges and engineering college professors in the level of perception regarding TQM in education". The obtained results taken by SPSS 14 indicated that, there was no significant difference between Arts and Science and engineering colleges in the perception of TQM (t = 1.17 significant of 0.11 level). Thus, respecting the null hypothesis, it is inferred that, there is no significant difference between Arts and Science and engineering college professors in the perception about TQM in education.

Findings and Discussion

There is significant difference between male and female professors in the perception about TQM in education. There is no significant difference between Arts and Science college and engineering collegein the perception about TQM in education. More than 50% art and science colleges professors exhibited Average level of perception about TQM in education. Female professors had better perception about Total Quality Management (TQM) in education than male professsors. Arts and Science professors in colleges do not differ in the perception about TQM in education. To conclude, educational organisations, such as colleges and universities should have individuals who are committed

to their organization, profession and well- being of their students. The vitality of all educational organisations lies in the willingness of principals to contribute to the development of their organisations. The process of TQM will lead to all round development of the institution, principals, professors and students. It reveals that there is no difference between male and female of professors in the level of perception total quality management in education. In contrast, study found the significant difference between male and female professors in the perception about TQM in education. It has been suggested that total quality management may be a more feminine style of leading, but found a significant difference between female and male professors and total quality management. Men attributed their use of power and direct styles to total quality management, whereas women attributed their use of relational styles to total quality management.

Conclusion

In all fields, especially education quality has an important matter. Total Quality Management as a necessary element always has a direct influence on the human improvement. It can be also led to high commitment and sprit in work environment. According to the study majority of art and science colleges professors and engineering professors have exhibited Average level of TQM in education. However, the percentage of professors with Above Average level of TQM is more than that of professors with Below Average level of TQM. Usually the common observation is that, females' professors are more sincere and committed to their work. Always give importance to the quality as such female professors in the present also study have better perception than male professors about TQM in education. However, it can be suggested that, measures should be taken to see that, male professors also have better perception of TQM and all the activities of the both the colleges to promote quality education. It is better for all the professors of the institutions to be exposed to more quality in education which in turn would influence the perception of teaching. Professors should be encouraged towards positive aspect of TQM and to take active participation to render quality education.

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