
14. TOWARDS TOTAL QUALITY-SOME SMALL STEPS TAKEN BY NEHRU COLLEGE OF ENGINEERING AND RESEARCH CENTRE, PAMPADY, KERALA

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Abstract

Quality is customer satisfaction, whereas Total Quality is customer delight. In an engineering education system the product is graduating students. Their quality is based on the quantum and quality of their knowledge, skills and attitude, which will be gainfully used for the benefit of mankind. This in turn very much depends upon the way in which, proper systems are put in place in the college to manage the quality. Total Quality Management is a very long journey. Some essential ingredients for managing Total Quality are effective communication, measuring performance regularly, responsiveness, empathy, total involvement, continuous training and rewards & punishments. The Nehru College of Engineering and Research Centre, a young self-financing Engineering college in Kerala has taken some small, but sure and steady steps to incorporate the above facets in their operations, so that they are on the right path to achieve Total Quality. These are explained in detail in this paper. It is expected that the continuous practice of the above principles and proper refinements of the same from time to time, will induce a quality culture in every one which will result in doing every thing right the first time and every time.

1. Introduction

Nehru College of Engineering and Research Centre (NCERC) started functioning in 2002 with four branches in engineering. Two more branches were added in 2004. This institute is ISO-9001:2000 certified. At present, there are over 1250 students and more than 100 faculty and staff members in this college. The far-sighted management of the college had the vision of imparting excellent education to the young aspiring engineers and started taking steps from the very beginning to do everything possible to meet the objective and got themselves completely involved in the process. After building up enviable infrastructural facilities, they have given full attention to the teaching- learning

process and its up-gradation. The various instruments and systems used in this "total quality management" journey are described in the following sections

2. Effective Communication

Effective communication is the keystone of any organization. In an educational institute, key players are the students, the faculty members, the parents and the management. Having an open, transparent two-way communication system is an essential requirement in achieving Total Quality. At NCERC we are trying to achieve this goal by the diligent use of the following instruments and systems.

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2.1. Course File

Every faculty member maintains a course file (A 40 page booklet) for each subject handled by him during a semester. He has to meticulously fill in the various details in the booklet regularly. Before the start of the course, he fills the academic calendar, semester plan, syllabus and the teaching plan for the entire course and gets it approved by the head of his department (HOD). On starting the classes, he enters on a daily basis, topics covered and class attendance which will be combined together at the end of the month and shown to the HOD and the Principal for their records and corrective actions, if any. Details of assignments given and seminars conducted are also recorded as and when they take place. Marks awarded to the students in series tests and model examination are entered and a detailed analysis of the results is carried out indicating percentage of pass, names of non-conforming students, root cause of failure and corrective actions to be taken. Student's performance report is also maintained week wise for the whole semester for proper monitoring of progress and advice, if any to be given. The HODs and Principal keep a close watch on the course file. The monthly checking of this document enables the authorities not only to monitor the learning process, but also to point out the deficiencies, if any in the teaching process and to help the teachers, particularly the younger ones, to improve their performance. This can also be used for the performance appraisal of the teachers, as their sincerity, regularity etc are directly reflected on how correctly and punctually they fill the various details called for. The ISO auditors have commented that the course file goes far beyond the requirements of the normal ISO documentation. In short, the course file helps the teacher to plan the course delivery, allows the HODs and Principal to assess the progress of the course and the performance of faculty and to take suitable corrective actions on time. It acts as a powerful communication medium between the students, teachers and higher authorities.

2.2. Weekly Progress Report

At the end of every week, the faculty members of each department have to complete a format indicating the number of lectures scheduled and actually conducted, cumulative number of lectures taken till date and the percentage of the course completed. This document is to be sent to the Principal with the comments of the HOD. This helps the Principal to ascertain which of the courses are on schedule, which ones are going ahead of the schedule/lagging behind. Suitable corrective actions are initiated, if necessary, without any delay.

2.3. Student's Feed back on Faculty

As in the all other self financing colleges in the State, most of our faculty members are fresh candidates. They have been given an induction training on Instructional Techniques covering the basics of learning theories, effective presentation, assessment of learning etc, so that they can help students learn better. However, a constant watch on their performance is necessary to enhance their effectiveness in teaching. A one page questionnaire, where the students will have to evaluate every teacher on a four-point scale in ten specific parameters, is used for this purpose. Feedback is taken twice every semester – the first one at the end of the first month and the second one towards the end of the semester. Suggestions for improvement are given based on the first feedback and all are encouraged to correct deficiencies, if any.

2.4. Group Tutor System.

Students of each class are divided into groups of approximately 30 and each group is put under the guidance of a faculty member, who acts as the advisor/ mentor for the group. A student record form is maintained, which is constantly updated by the mentor indicating the performance in the university examinations, special achievements or disciplinary actions faced, if any etc. The mentor compiles information from the course files maintained by

the teachers and holds a counselling session every fortnight with the students. All matters including personal problems can be discussed in these sessions. The whole idea is to identify difficulties and help students to improve. Cases which need special attention are reported to the Principal, who can call the parents if necessary, to open the ways for improvement. The group tutor system works on a very open, friendly and cordial atmosphere.

2.5. Progress Reports to the Parents.

After the series test papers are evaluated, the performance of the students along with their attendance is communicated to their parents. The performance is graded as excellent, good, average and poor. The parents of poor performers are asked to come to the college and meet the Principal and the teachers to iron out problems.

2.6. Simple Personal Measures

Apart from the above systematic procedures through well prepared documents, certain simple personal measures to bring in a human touch have also been tried, to the great advantage to students. Two such measures are indicated below

2.6.1. Distribution of mark sheets by HODs

The earlier practice in the college was to ask the students to collect the University mark sheets from the academic office. The author, on joining as the Principal, changed the practice and requested all HODs to distribute the mark sheets to the students individually with appropriate words of encouragement or advice. The author also being head of the department of EEE, called all these students individually to his cabin and handed over them their mark lists after a perusal of the same and with his own comments. It was heartening that some parents called him on phone and thanked him for the personal attention given to their children.

2.6.2. Target setting by the students

The author, on joining as the Principal the college, visited each and every class and spent half an hour with students analyzing the class performance till then and helping them to set a target (pass percentage) for the class by themselves for the next University examinations. He was glad to see that every class set an achievable target, higher than the existing performance. These figures have been communicated to the teachers as well, who have been requested to help the students to achieve their goals. Also top students have been identified for special attention, as they are potential rank holders. Actions like these, which are nothing but simple face to face communication can have a morale boosting effect on the students. The author has also announced an Open Door Policy, whereby both students and faculty members can meet him any time with their problems, to find speedy workable solutions

3. Measuring performance regularly.

The success of any activity depends upon measuring performance regularly and taking corrective actions if necessary. As mentioned in sections 2.2, 2.3 and 2.4, the performance of students and teachers are continuously monitored. Appropriate feedback is given to them to make improvements. Students are administered a model examination at the end of each semester, the duration and pattern of questions being the same as in the university examinations. Thus this becomes a dress rehearsal for the students for the final examinations. The answer scripts are valued and returned back to the students with suitable individual suggestions and comments before the classes finally close.

4. Responsiveness

A Total Quality organization has got to be very responsive to its customers. At NCERC,

we make it a point to be quick in taking appropriate actions based on the feedback from the students, teachers and parents. We were having a 6-day week from the beginning of the college. However the students had a complaint that they were not getting sufficient time for doing homework, assignments and for assimilating the knowledge. The parents also had the same feeling, particularly so because, many of the students are day scholars who have to spend quite some time everyday on traveling. In response to the request from them which was found to be genuine. The college has made the first and third Saturdays as working days and the remaining Saturdays in every month as off-days. This has resulted in an overall improvement in the performance.

5. Rewards and Punishments

Giving rewards for commendable performance and sanctions for inferior work is an age-old method for improving quality. While we reward good performers quite often, sanctions are limited to extreme cases. Poor performers are given counseling with a view to correct and improve them using open, face to face communication. Our Chairman has made an announcement recently that any student who secures any of the first four ranks in the university examinations will be given back the entire fees paid by him / her during his / her studies at the college. A one sovereign gold coin also will be given to them. We are sure that this noble gesture from our Chairman will bring in positive results this year and hereafter. Also the Principal of the college has instituted a goal medal for the best outgoing student in each

stream of studies. Faculty members who publish papers, write books or make presentations at National /International conferences are offered additional increments. As teachers not only disseminate knowledge, but also are supposed to develop knowledge, writing and publishing textbooks suited to our syllabus has been taken up as a major activity for improving quality. The management of the college has offered all assistance and support to our teachers in this regard. This is expected to bear fruits in the very near future.

6. Conclusion

Being a new self-financing Engineering college, NCERC has realized the importance of bringing in quality in all its operations from the very early stages. The systems and procedures that have been put in place and practised with due care has put us on the right road to Total Quality. The students and teachers are the major partners in the educational process, the management and parents playing the supporting roles. With the disciplined, determined and dedicated efforts from the teachers and students, cooperation from the parents and whole-hearted support and active involvement of the enlightened management, we are confident of making continuous improvement in our operations resulting in best quality products-learned engineers

Reference:

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