

3. TOTAL QUALITY MANAGEMENT IN EDUCATION

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Abstract

This article deals with the significance of the Total Quality Management (TQM) in Technical Education and emphasizes on the fact that the educational institutions which do not practice TQM can become globally non-competitive quite rapidly. The author has also thrown a glance on some useful elements to be taken care of by the institutions so as to maintain and sustain the quality of Technical Education. Finally, a need for the formation of steering committee in each educational institution for the effective and continuous implementation of the elements of TQM has been stressed by the author.

NECESSITY OF TQM

Education today is in search of quality. The concept of quality is known to us in a very traditional way. But, the last fifty years have seen a sea-change in the quality perspective. There has occurred a paradigm shift in the definition of quality. Now, the concepts of quality, quality by inspection, quality assurance and total quality have come up. The industrial organizations have been compelled to go in for quality on account of globalization, liberalization and privatization.

It is now the turn of Engineering Education to follow in the foot steps of Industry. Hence, those who are involved in education, particularly in higher and technical education, need to understand quality and adopt it. Quality concept is knocking on the gates of Educational Institutions and now it is their turn to demonstrate publicly that they can also deliver quality services consistently. The Educational Institutions that do not practice TQM can become globally non-competitive quite rapidly.

This march towards non-competitiveness can be avoided if citizens are to become TQM practioners. Therefore, the potential benefits of TQM are very clear:

- TQM can help an educational institution in providing better services to its primary customers-students and employers.
- The continuous improvement focus of TQM is a fundamental way of fulfilling the accountability requirements common to educational reforms.
- Operating a no-fear TQM system with a focus on continuous growth and improvement offers more excitement and challenge to students and teachers than a 'good-enough' learning environment can provide. Therefore, the environment for teaching and learning is improved.

ELEMENTS OF TQM IN EDUCATION

There has been traditional reluctance on the part of education to adopt industrial

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management methodologies and language. On account of this reason only the Quality Movement had a late entry into the educational field. But now the educationists have also realized the significance of TQM in educational institutions and hence they are constantly working on improving the quality and standard of education, especially engineering education in our country. The educational institutions are trying to provide quality service to their customers, students and employers. The concept of a service being 'good enough' is now considered inadequate.

In order to understand and implement the concepts of TQM in educational institutions to the fullest, each of the following elements is very important:

1. Awareness and Commitment for Every one

TQM is a philosophy of Continuous Improvement which can provide any educational institution with a set of practical tools for meeting and exceeding the present and future needs, wants and expectations of customers. It is not an imposition on the institution. The urge for TQM must come from within the Institution. It is not merely an inspection. It is about always trying to do things right the first time and every time, rather than checking them occasionally if they have gone wrong. It is not something which only senior managers can do and pass on to the lower ranks. The word 'Total' in TQM indicates that everything and everybody irrespective of his/her rank and file in the institution is involved in the continuous improvement process.

TQM is both a mindset and a set of practical activities—an attitude of mind as well as a method of promoting Continuous Improvement Process. TQM is a practical but strategic approach for running an institution which focuses on the needs of the customers and clients. It rejects any outcome other than excellence. It is not only a set of slogans, but is a deliberate and consciously planned approach to achieve the desired levels of quality in a consistent fashion.

There should be a strategic planning focusing on governance, financial allocation, monitoring and auditing procedures and prioritization of activities in order to implement TQM in an educational institution. This will result in infra-structure, planning, resource mobilization, changes in management styles, the types of curriculum designed and the programme options given to students and timely faculty improvement for the staff and the extension activities planned for the neighbourhood.

In order to have cutting edge, the management ought to focus on:

- (i) excellence in teaching, learning and evaluation,
- (ii) providing student support services,
- (iii) continually upgrading learning resources,
- (iv) motivation to faculty to do research in frontline areas,
- (v) providing opportunities for counseling,
- (vi) establishing extensive linkages with other institutions,
- (vii) restructuring the curriculum through student's feedback,
- (viii) feedback be in line with current needs and
- (ix) supplying graduates to the world of work.

Thus, the establishment of goals by offering appropriate curriculum and providing the infrastructure to create an ambience of learning, teaching, research and extension are the essential thrusts of the strategic planning in order to dwell upon to achieve excellence in education in the fast changing world.

2. A Clear Mission, Vision and Guiding Principles

Managing continuous movement towards progressively higher quality standards depends on defining those standards. So, if a TQM

Steering Committee is formed in an educational institution, it should determine the answer to this question – Does the institution have a clear, customer-focused mission statement and a functioning process for departments for translating this statement into the outcomes for graduates? If the answer is 'no', that problem must be addressed with local, state, national and employer standards. These standards should emphasize developing students' abilities to solve real life problems rather than just memorizing the subject matter. The latter does not represent quality for either students or employers.

The educational administrator, therefore, must first explore and agree upon the mission, vision and guiding principles of the educational institution; these form the foundation for the strategic plan. The mission of an organization defines the reason for its existence. It establishes the contexts within which daily operating decisions are made.

The vision describes where the institution is headed and what it intends to be. The guiding principles direct the journey to a vision by defining attitudes and policies for all employees that are re-inforced through behaviours at all levels of the institution.

3. A Systems Planning Approach

Many of our universities in the country follow the affiliating system. Universities and autonomous college, by and large, have the academic and financial freedom. The essential features of an educational institution to involve in strategic planning is its freedom to select its major types of activity, its key-decision making bodies or posts and those who are to occupy them, and its broad policy on style of operation. All these components interact to give such institution a particular ethos within a wider ethos of comparable institutions, which in turn operate within a society and its culture. They also interact through the key influential leaders and decision makers to give a style of operation. Since each institution has to adapt to a continually changing

environment externally and composition or membership internally, the institution has to make different types of decisions.

Universities today have shown dramatic flexibility in a massive expansion at a speed unprecedented in the University history and involving institutions of a social and managerial complexity that makes them relatively macro organizations with large number of people-staff and students. The expansion of their teaching function at the behest of society has gone ahead at a time of increasing changes in both patterns of student demand and employment opportunities. At the same time, pressure for economy in research and greater accountability for their deployment has coincided with a resurgence of demands for greater vocational relevance in their course and immediate practical application of their studies and research.

The individual Universities have, therefore, been faced with questions of basic objectives and priorities. These have ranged from the balance of teaching and research or undergraduate and post graduate activities to those of growth scale and diversity of interests. The environment within which such issues have had to be resolved has been one of increasing central directions of resources, especially for activities which are either capital intensive or new fields of provision such as management studies.

In order to do away the above mentioned difficulties and to develop higher level of competence in students, there must be higher levels of system-wide and cross-departmental planning for instructional improvement in educational institutions. Lack of system planning is a serious obstruction to higher quality in students' learning. Of course, such a system approach to learning improvement normally happens only if inter-departmental or inter-institutional planning arranges it.

4. Teaming Replacing Hierarchy

The hierarchical organizations of yesterday

are still dominant in too many educational institutions. Such institutions tend to promote individual effort 'good enough' to satisfy a supervisor who sometimes knows less about how to achieve quality than those he supervises. So, the cross-departmental teams can and do promote stronger improvement if they are given a clear mission and strong authority, and are supported rather than hampered by supervisors. Support is a major element in the success of TQM. If administrators, supervisors and department chairpersons support task improvement teams, such teams can generate more motivation and improvement than can otherwise be achieved. If not, TQM can not achieve its potential. In properly operated TQM programs, the administrators and supervisors work diligently at insisting on clear visions and missions; co-ordinating among task or improvement teams, and at supporting the efforts and authority of improvement teams to the highest possible degree.

5. Enablement and Empowerment Replacing Fear

Traditional do-it-to-them evaluation systems by themselves generate fear and lack of initiative. The faculty members focus on doing whatever is enough to keep the boss happy. However, if volunteer members of empowered improvement teams are given opportunities to become experts and are enabled to use their expertise, the institutions progress at a faster pace. As a matter of fact, these teams should be provided with funding and time for attending Conferences/Seminars/Symposia/STTPs/CEPs. These teams should also be allowed to interact with other institutions in order to share their expertise and collaborate. The team members should also be given the background and authority to make informed decision. Each educational institution should define and implement objectives for a strong focus on being a teaching-learning organization, an organization in which everyone is a learner on paths to quality improvement.

6. Focus on Mastery Learning

In the traditional classroom, teaching, the teachers often follow the sequence 1. Plan 2. Teach 3. Test.

The TQM alternative is 1. Plan 2. Teach (Do) 3. Check* 4. Revise Teaching (Act) Test**

In the "Check" step, formative (not for grade) testing is used to determine as to which learning has been missed by some students. Then the non-mastered material is re-taught in some different way or style. If advisable, the checking and revised teaching can be repeated more than once. Mean while students who have mastered the material move to enrichment learning or assist with learning of those who have not obtained mastery. This system of mastery learning can result in much more complete learning for most students. This improvement in learning is the basic purpose of TQM in the classroom.

7. Management by Measurement

Universities, over the years, have developed remarkable capability to adjust with the changing condition they are confronted with, without deviating from basic values and ideals. The ideals like the search for truth and the pursuit of knowledge are the intrinsic qualities of the institutions of higher education. Because of their basic orientation towards knowledge, the universities irrespective of their geographical location and socio-economic environment have to protect a few fundamental characteristics. They are the acceptance of:

- The authority of the academics to take decisions regarding the knowledge-oriented academic activities of teaching and research.
- The extreme diffusion of the decision – making power (decentralization of authority) to make a University system a federal system, and the location of authority mainly with academics.

The observance and protection of these fundamental characteristic- intrinsic qualities- is

the prime duty of the University authorities. To know the quality of a University, one has to look for evidence that would reflect in the state of intrinsic qualities in a University.

The beneficiaries look at education from the view-point of "fitness for purpose". The extrinsic dimensions focus our attention on the idea of accountability. Accountability means the requirement to demonstrate responsible actions to one more external constituency; in our case, the beneficiaries.

The measurement of quality in a highly complex system like higher education needs to address itself to both the intrinsic and extrinsic requirements of Universities. Several questions could be associated with the measurement of quality.

What evidence will reflect the performance? What should be the performance standard? This means that one has to make a judgement with reference to possible choices for performance standards.

The measurement of quality thus embraces a good bit of work- selecting evidence, making provisions for both acquisition and analysis of data, setting an appropriate standard of performance and setting up the mechanism to exercise judgements on performance.

8. A Humanistic and a Brain Compatible Focus in the Learning Environment

The educational institutions should concentrate on the following in order to ensure quality work pertaining to academics:

- There must be a warm, supportive learning environment.
- Students should be asked to do only useful work.
- Students should be asked to do the best they can do.

- Students should be asked to evaluate their own work and improve it.
- Quality work should always feel good.
- Quality work should never be destructive.
- Staff members should use more brain compatible technique in teaching.
- More open and flexible education structure for enhancing the quality of teaching and learning should be created.
- Curricula should be revamped to reflect the need for national development with international bench marks.
- Creativity of teachers, research fellows, students and external experts should be harnessed to develop multi-media teaching material.
- Electronic communication networks should be established for sharing the academic resources.
- University's role of service to society through an interdisciplinary and trans-disciplinary approach should be re-inforced.
- Personality development and sports activities should be supported.
- Focus on Faculty development and rewards.
- Research capabilities by upgrading scientific infra-structure in Universities and Inter-University Centres should be enhanced.
- Investment in basic and utility oriented research should be made and interdisciplinary research in all subjects and disciplines be promoted.
- Interaction between research and development institutions and industries for synergetic research and development programmes should be encouraged.
- Cross flow of teachers/scientists through interchange between Universities and diverse research laboratories at the national / international levels should be promoted.
- A mechanism for proactive efforts to attract students from disadvantage groups into the

main streams of higher education should be devised.

- Opportunities for enhanced financial support for innovative and creative institution should be developed.

CONCLUDING REMARKS

To implement the concepts of TQM in any educational institution, there should be a steering committee that develops a plan for supporting the staff in TQM implementation and builds a positive connection between that committee and the traditional supervisors in the educational institution. The advice from those consultants/institutions who/which have succeeded in TQM implementation might be used. This action is particularly important

because those people/institutions who/which have learnt things the hard way can save much time and trouble with practical advice.

TQM is a continuous journey towards excellence. Even if educational administrators are able to get a fraction of it, it will bring the engineering education to greater heights.

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