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**TOTAL QUALITY MANAGEMENT:  
A CONTINUOUS IMPROVEMENT PROCESS IN EDUCATION**

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**Abstract**

*Total Quality Management (TQM) is considered as an important concept that mostly deals with the management concerns, but in the new era this concept has crossed its boundary and applying in many other fields of life. The role of TQM in education has blessed with many fruitful outcomes. Now, TQM has been integrated with many components of education that are facilitated by it in many ways. TQM involves principles applicable to classroom teaching, administration, examination system, curriculum development, and faculty development, which mean changing the culture of organization. There is many application of TQM for management, teachers, classroom settings and students as well as educational research in also. Moreover, there are many challenges in the process of imparted quality education, but all these challenge of education can be successfully align with the actively help of TQM principles along with the quality in education provisioning can be assured.*

**Key Words:** TQM, Quality, Education, Applications, Concerns.

**INTRODUCTION**

Quality of education is an important issue in the world of competitive environment. Therefore, changes or amendments are required in the educational process to improve education (Mishra & Pandey; 2013). Education is an indispensable requirement for the national growth and development. Therefore, there is intense need of quality management in the educational sector especially at the basic level. The basic educational system acts as foundation stone for the academic future of every nation which is possible by ensuring principles of quality management of basic schools (Murad & Rajesh; 2010). Achievement of national goals is through Educational development. Teacher education has a significant role to play in maintaining the quality of education. Quality management is not an overnight process and it is not the product of a single hand for the realization of national goals. Elton (1992) suggests that quality enhancement focuses on quality E's empowerment, enthusiasm, expertise and excellence. As students are viewed as an integral part of the learning process (Wiklund et al., 2003), this type of evaluation tends to be more formative in nature and therefore more likely to lead to continual quality improvement efforts.

Total Quality Management (TQM) has been used successfully in a variety of organization viz., health care organizations, government agencies, educational institutes, banks, library, transportation facility etc. Growth of the educational institutes depends on the environment, working style, and ultimately the satisfaction of the customers. To serve the interest of the stakeholders, institutes realize the importance of TQM principles. The philosophy of these TQM

principles underlines the necessity of satisfaction and commitment at all levels. TQM is considered an important concept that mostly deals with the management, but in the new era this concept has crossed its boundaries and applying in many fields of life.

### **WHAT IS TQM?**

According to **Wilkinson and Witcher (1991)** that TQM is composed of three terms: *Total*: meaning that every person is involved including customer and suppliers, *Quality*: implying that customer requirements are met exactly and *Management*: indicating that senior executives are fully committed.

**Kaufman (1992)** defined “total quality management provides what is required as judged by the client. It is accomplished through everyone in the organisation being committed to achieve results, a passion for quality and decisions based on performance data.”

According to **Dean and Bowen (1994)** that “TQM as management approach consisting of jointly supported principles which are all supported by a number of practices and techniques.”

In the words of **Karani and Okibo (2012)** that “Total quality management (TQM) as a management approach of an organization which is concentrated on quality in which all its workforce are involved to ensure organizational development and long-term success. This aim could be possible through customer satisfaction. In addition to customer satisfaction, it is imperative to beneficialize the society and all the employees of an organization”.

TQM plays a crucial role in uplifting and ensuring long-term success of an organization. Implementation of TQM has been considered an important factor for enhancing organizational productivity and efficiency (Gharakhani, *et. al*, 2013). The aim of total quality management is to utilize resources effectively, to accomplish success, and to ensure financial stability. Successful TQM implementation results in improving overall organizational performance such as improved employees participation, better communication and improved enrolment of learners, better quality and improved competitive advantage (Wani & Mehraj (2014). It is cleared from the above definitions that Total Quality Management (TQM) mainly focused on the two notions: firstly nonstop up-gradation in a system and the apparatus, techniques/methods used in an effective manner. Although, it is mostly used in industry but TQM philosophy focused on the stratification of customer by using all elements together into the better production.

### **ELEMENTS OF TQM**

**There are many elements of total quality management, Abraham (2015) defined eight elements of Total Quality Managements are as under:**

- **Organization Vision:** it provides the framework that guides a firm beliefs and values. The organizational vision should be simple and accurate and must be able to communicate in such a way that it will achieve the desire purposes.
  - **Barrier Removal:** Since the future is unrealistic and it is inevitable that change will be resisted, a great deal effort in TQM is expanded in overcoming such resistance that might likely occur in an organization, so all effort is made to introduce education and communication, participation, facilitation and support, negotiation, focus on common objectives as many others as to avoid resistance to change during the process etc.
- Communication: one of the elements of TQM is communication which may be written

, verbal or nonverbal. All forms of communication involve four elements i.e. sender, receiver, message and the medium. The tool should be managed in such a way that it will not jeopardize the management interest of the firm.

- **Continuous Evaluation:** Feedback is essential to continuous improvement, which enables the sender to know whether its information has achieved a desirable result. The key of continuous evaluation is that information is received in time to allow initiating corrective actions, not only that it enables the sender to know whether the information is delivered to someone who can initiate action.
- **Continuous Improvement:** Continuous improvement process is easier to manage and utilizes every employee or worker's talents, the Japanese ideology called this approach KAIZEN. This idea fits hand in hand with team building approach such as quality circles, brain storming etc. Customer-vendor relationship: Customer-vendor relationship is very essential key in TQM approach and to achieve these, there is necessity to implement some strategies as to improve the relationships e.g., link organizational vision to customer satisfaction, reward suppliers, move to single sourcing, minimize the overall number of vendors, identify internal & external customer, establish routine dialogue with customer, involve the customer in planning & development aspect etc.
- **Empowering the Worker:** This means enabling worker to achieve his or her highest potentials. Empowerment requires recognizing that management is in place to aid the worker's assistance in overcoming problems they encounter and not to place new roadblocks in their way.
- **Training:** One of the elements of TQM is training, which could be on the job or off the job as the case may be. All employees or workers in the firm need and deserve training services in order to improve their skills competency, efficiency & effectiveness to the successful implementation of TQM approach in the firm system (Abraham, 2015).

Thus, organization vision, barrier removal, continuous evaluation, continuous improvement, empowering the worker and training; are the main concerned elements of TQM. These help directly in the improvements of quality dimensions of any product and organization.

#### **DIMENSIONS OF TQM**

Price and Gaskill (1990) have identified three dimensions of TQM, like:

- **the product and service dimension:** the degree to which the customer is satisfied with the product or service supplied;
- **the people dimension:** the degree to which the customer is satisfied with the relationship with the people in the supplying organizations;
- **the process dimension :** the degree to which the supplier is satisfied with the internal work processes, which are used to develop the products and services supplied to the customers.

These are the main dimensions of the TQM, these played significant role to satisfy customer with the help of product, services to develop the products and services supplied to the customers.

## **PRINCIPLES OF TQM**

Principles play significance role in the development, improvement and evaluation of any concept. Martin (1993) defined key principles of TQM are as following:

### **Management Commitment**

- Plan (drive, direct)
- Do (deploy, support, participate)
- Check (review)
- Act (recognize, communicate, revise)

### **Employee Empowerment**

- Training
- Suggestion scheme
- Measurement and recognition
- Excellence teams

### **Fact Based Decision Making**

- SPC (statistical process control)
- DOE, FMEA
- The 7 statistical tools
- TOPS (Ford 8D – team-oriented problem solving)

### **Continuous Improvement**

- Systematic measurement and focus on CONQ
- Excellence teams
- Cross-functional process management
- Attain, maintain, improve standards

### **Customer Focus**

- Supplier partnership
- Service relationship with internal customers
- Never compromise quality
- Customer driven standards (Martin; 1993)

Thus, Martin described management commitment, employee empowerment, fact based decision making, continuous improvement and customer focus are the main principles of TQM. The practice of these principles helps in the improvements of quality aspects of product, services and organization.

## **APPLICATIONS OF TQM IN EDUCATION: A CONTINUOUS IMPROVEMENT PROCESS IN EDUCATION**

TQM in education was surfaced in 1988 at Mt. Edgecombe High school in Sitka, Alaska, by David Langford. Crawford and Shutler (1999) supported the TQM initiatives in education, who applied 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 (Ali and Zairi 2005). The main effects of this approach is reported by UNESCO as that many countries initiated "national quality assurance mechanisms" and many more are in the process of evolving suitable strategy. Most of the quality assurance bodies were established in nineties and after a few years of practical experience, they have started rethinking many issues of quality assurance (UNESCO, 2002).

Important elements for TQM implementation comprise of establishing a strong sense of school vision; improving personal mastery learning of workforce; concentrating on student-driven values; developing commendable and achievable goals; and enhancing day-to-day and routine management (Herman & Herman, 1995). Commenting on TQM implementation, Toremén *et. al.* (2009) mentioned that there is need for an effective change management, educating staff and utilizing human resources to attain a system-wide quality improvement, to implement the principles of TQM. Successful implementation of TQM needs effective leadership, institutional commitment and a clear vision. According to Wani and Mehraj (2014), the development of a long-range leadership, teamwork for a common vision and institutional commitment are necessary factors for the successful implementation of TQM. Further they added that leadership, accountability and cooperation as an important dimensions of TQM which have positive effects on the organizational performance. Therefore, these dimensions of TQM may be implemented, improved, well-organized and made effective to ensure effective functioning, better performance and quality.

Other contributory factors regarding TQM implementation are; resources; employee satisfaction and needs; training; suitable organizational culture; favourable environment; subordinates' cooperation; effective curriculum; effective planning etc. which are essential to successful implementation of TQM. Further, Ater (2013) found that resources are very beneficial in the process of TQM implementation in public secondary schools. Personnel, educational materials and funding are very important for successful implementation of TQM. Regarding the TQM challenges, Kosgei (2014) concluded that a number of challenges in implementing TQM were; lack of commitment by the management and some workforce, school's organizational culture, poor documentation, inadequate training of staff, and ineffective communication. Further, Mobegi *et. al.*, (2010) in his study revealed that there were insufficient physical, learning and instructional materials in all schools. The ratio of textbook-pupil was 1:20. Furthermore, they also reported that over 81.1% mixed boys' and girls' schools lacked important facilities, such as tapped water, transport and electricity. Thus, there are many significances of TQM in the education and TQM application always focus on the resources; personnel, educational materials, employee satisfaction and needs; training; suitable organizational culture; favourable environment; subordinates' cooperation; effective curriculum; effective planning and continuous improvement in education process.

#### **ADVANTAGES OF TQM FOR A SCHOOL**

TQM is a philosophy and system for continuously improving the services and/or products offered to customers (Ron Fitzgerald, 2004). Therefore, the potential benefits of TQM in a school, district or college are very clear:

- TQM can help a school or college provide better service 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 reform.
- 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 climate for learning is improved.

There are many significant advantages of practice and applications of TQM for the school, but along with it there are some barriers to translating TQM for the classroom practices.

### **TQM IN THE CLASSROOM**

Several initiatives to introduce the TQM principle and practice of continuous quality improvement into the classroom have generated interest among faculty. One is Angelo and Cross' (1993) classroom assessment techniques (CAT) model. CAT is design to use by faculty members to assess the quality of teaching and learning in their own classrooms. "CAT allows instructors to apply their own creativity and knowledge of their discipline to develop assessment measures that meet their particular needs and teaching priorities". A different approach to applying TQM in the classroom is Baugher's (1992) LEARN (Locate-Establish-Assess-Research-Nominate) model, developed at Samford University, It brings the faculty member together with a student quality team to identify opportunities for improving student learning in a specific class. The student team uses brainstorming to identify characteristics that may be interfering with student learning. Additionally, the team develops a survey, containing items based on their brainstorming, and uses it to gather data from the entire class. The objective is to identify opportunities for improving the teaching/learning environment. The data gathered from the class are used to plan improvements in classroom processes. The changes are implemented and then evaluated to determine their impact.

Thus, these above mentioned ways of TQM help teacher, administrators, students and society in the continuous improvement in school, classroom and overall education system. In this regard, Deming described 14 points guideline principle in education which are considered suitable for achieving TQM in education.

### **DEMING'S 14 POINTS GUIDELINE PRINCIPLE IN EDUCATION**

Deming's 14 points have become the guideline principle for organization challenging of the prestigious Deming prize given by Japanese Union of Scientist and Engineers (JUSE). These guideline principles are also useful in the Education field. These are as follow:

- **Consistency of purpose is must** for continual improvement of the Product-Administrator has to ensure that an institute's vision of quality is understood by all the faculty and that they move continuously toward it.
- **Continuous change and innovation is a must** for survival-In today's complex institutional situation, it is not possible for small group of faculty to identify and sort out quality problems. Thus, the entire faculty has to be involved in this process.
- **Quality cannot be achieved only by inspection**-Inspection wastes the valuable productive time and adds cost and to the product without any

valuable addition. Inspections may not be perfect, leading some defectives to be passed on to the customer. Defects are symptoms removed by inspection, while the disease (root cause) remains intact. Only taking test or Exam cannot lead to improve the Quality of the student and institution.

- **Lowest** price should not be the criteria for selecting a supplier- Many of the colleges are asking for the lowest fees often offer low quality teaching, leading to increase in overall costs of the students due to increase cost of time, rework, and lower level of infrastructure,
- **Eliminate** waste in **every** functional are, not only production-Even processes in accounting, HRM, Finance and Marketing department of institute effect the quality of the product and thus, generate waste. Therefore, whole intuition should contribute in enhancing quality.
- **On-the Job** training of Faculty-It required to give training to all faculties for their improvement because it directly leads to improvement of teaching. Collage arranged some FDP program for their faculty.
- **Attitude** of Head and Faculty **towards students should** be that of a facilitator.
- **Encourage students** to give quality improvement ideas without fear.
- **Remove** barriers **between** department and **individual**- Do not look at problems within strict functional limits and do not ignore the concerns raised by related functional areas.
- **Poster and Slogans** should be eliminated-Do not tell faculty to work harder through posters and slogans. Provide tools and training so that they work smarter, leading to better quality.
- **Numerical targets and work standards may affect quality**- Reasonable numerical target make the faculty complacent, while excessively demanding ones may leads to compromise on quality in order to fulfil the targets. Such targets cannot be eliminated but can be set such that quality is not compromised.
- **Remove obstacles in the good workmanship.**
- **Vigorous programs of retaining and educating of faculty are must.**
- **Top management's commitment for ever-improving quality is must.** (Deming; 1982)

Thus, with the help of Deming's 14 points related with guideline principle for organization any institute can achieve TQM in education. That will further help the society at large.

### **BARRIERS TO TRANSLATING TQM FOR THE CLASSROOM**

Schauerman and Peachy (1994), Heverly (1994), and Chaffee and Sherr (1992) described some of the barriers to translating TQM to the classroom:

- Faculty resistance to the notion of the student as customer or beneficiary;
- Faculty resistance to interference in their disciplinary and teaching expertise;
- Differences between faculty and TQM reward and recognition systems;
- Threats to academic freedom;
- Costs of TQM training, which takes away from direct classroom support.

Despite these barriers, some community colleges are finding innovative ways to apply TQM in the classroom. Therefore, to reduce and control all these barriers we can facilitate, implement and ensure various principles and guidelines of TQM in education.

### **Final Words**

Without any confusion, quality is one of the most important issues in education. Nevertheless, on the other side in the era of pragmatism, the first and foremost crisis in education is of quality. This crisis is far from uniform, and even where it is most severe, pockets of excellence still exist the midst of mediocrity. On the whole, however, universities in developing countries face an urgent qualitative challenge as higher education has become an international system, with the “gold standard” largely being set by the leading American research universities (The World Bank, 1993). Thus, it is recognized that there are problems with today’s education system. Students leaving or graduating from high schools and colleges are unprepared to meet the demands of society. These students are product of an education system that does not focus on quality and is a cause of increase in social welfare cost. Quality management is a vehicle to which professionals can use to cope with the “forces of change” (Arcaro, 1997). In this regards, these challenge of education can be successfully align with the active help of TQM principles and practices along with it the quality in education provisioning can be assured with the help of TQM. Thus, all the principles application of TQM always directly and indirectly support continuous improvement in education process.

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