

The Implementation of Total Quality Management (TQM) as a Function of Improving Quality in Educational Institutions

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Abstract: *The quality of education is everybody's concern today. The implementation of Total Quality Management (TQM) in education organizations enables market competitiveness, innovation, flexibility and financial potential. TQM enables better control of processes in planning, design, distribution and contributes to greater flexibility. Many organizations have achieved excellence and competitive lead by putting into practice TQM policy. Most of the principles of TQM can be implemented in the area of education and training. This paper highlights the essence of TQM and explains how educational institutions can improve the quality by implementing TQM principles. This paper gives an overview of the latest research in the area of TQM implementation in education and is to analyzing thoughts of the modern management paradigm and also explains how higher education institutions can improve the quality by implementing TQM principles.*

Keywords: Total Quality management, Education, Knowledge management, Higher Education, Quality

1. Introduction

Academic institutions offering higher education in general and those offering professional education in particular are undergoing a process of change similar to what business organizations have undergone a few decades ago when they were confronted by competition. The speed of change is driven by multiple factors. Demands from industry, information-age mind set of the students, increased competition and the renewed quest among academic community are some of the factors driving this change. To ensure that higher education, particularly professional education, is able to deal with market and technological changes coupled with global requirements, it is important for institutions offering higher education to use appropriate curricula, course materials and teaching methodologies that are not only up-to-date, but also effective from learner's point of view. The exponential growth of knowledge, exploding instructional technologies, enhanced access to practices of premier institutions, accessibility to knowledge, globalization of education etc require educators and faculty members to continuously evaluate themselves and improve upon their effectiveness.

Higher Education

Higher education imparts in-depth knowledge and understanding so as to advance the students to new frontiers of knowledge in different walks of life (subject domains). It develops the student ability to question and seek truth and makes him/her competent to critique on contemporary issues. It broadens the intellectual powers of the individual within a narrow specialization, but also gives him/her a wider perspective of the world around. According to Ronald Barnett (1992) there are four predominant concepts of higher education.

- 1) **Higher education as the production of qualified human resources:** In this view, higher education is seen as a process in which students are counted as "products" absorbed in labor market. Thus, higher education becomes input to the growth and development of business and industry.
- 2) **Higher education as training for a research career:** In this view, higher education is preparation for qualified scientists and researchers who would continuously develop the frontiers of knowledge. Quality within this view point is more about research publications and transmission of academic rigor to do quality research.
- 3) **Higher education as the efficient management of teaching profession:** Many strongly believe that teaching is the core of educational institutions. Thus, higher education institutions focus on efficient management of teaching-learning provisions by improving the quality of teaching, enabling a higher completion rate among the students.
- 4) **Higher education as a matter of extending life chances:** In this view, higher education is seen as an opportunity to participate in the development process of individual through a flexible, continuing education mode.

Interestingly, all these four concepts of higher education are not exclusive; rather they are integrated and give an overall picture of higher education. If we look at the activities of colleges and universities, we will realize that teaching, research and extension form the three main functions of higher education.

Why Higher Education Institutions should worry about Quality?

As teachers, principals, heads of the department and policy makers in education we should worry

about quality of teaching, programmes, and institution because of the reasons

- 1) **Competition:** We are entering a new regime, where competition among educational institutions for students and funds will be highly significant. With globalization and GATS (Global Agreement on Trade in Services), the educational environment will be seized by increased competition. In order to survive in such situation, educational institutions need to worry about their quality
- 2) **Customer satisfaction:** Students, parents or sponsoring agencies as customers of the educational institutions are now highly conscious of their rights or getting value for their money and time spent. They are now demanding good quality teaching and receiving employable skill set and thus we should constantly worry about the relevance of our courses and programmes to the needs of the market.
- 3) **Maintaining standards:** As educational institutions, we should always concern about setting our own standard and maintaining it continuously year after year. In order to maintain the standard, we should continuously make efforts to improve quality of educational facilities.
- 4) **Accountability:** Every institution is accountable to its own stake holder in terms of the funds (public or private) used on it. Concern for quality will ensure accountability of funds utilized and inform the stake holders about taking appropriate decisions. Thus quality can be considered as a monitoring mechanism.
- 5) **Improve employee morale and motivation:** Concern for quality as an institution will improve the morale and motivation of the staff in performing their duties and responsibilities. If quality system is in place, the internal process would be systematic making every department complementing each other's service domain and helping in developing internal customer satisfaction leading to high morale and motivation.
- 6) **Credibility, prestige and status:** If institutions are concerned about quality, continuously and not once in a while. It will bring credibility to institutions and individuals because of consistency leading to practice, status and brand value.
- 7) **Image and visibility:** Quality institutions have the capacity to attract better stake holder support, like getting merit students from far and near, increased donation / grants from funding agencies and higher employer interest for easy placement of graduates.

Total Quality Management (TQM) represents a systematic approach to management with a view to continually improving quality that will exceed client expectations. This approach is based on the participation of all employees in order to meet the needs of the clients and thereby achieve the long-term success of the organization. The idea of TQM is that it is very expensive to conduct quality control through the outputs. Much more effective and efficient is that errors are removed immediately when the output is generated. This quality improvement as well as all the organization's performance is achieved through continuous research and advancement of the process systematically, integrally and consistently. The three basic principles of TQM are: focus on customers and all interested parties, teamwork of all employees in the organization and focus on processes supported by continuous improvement and learning. Apart

from the industry and educational institutions, it is necessary to establish a quality management system to successfully integrate these institutions into the European educational space. The application of TQM to educational institutions through measurement, analysis, achieving student satisfaction, continuous improvement and upgrading of the system leads to the excellence of such organizations. Compared to conventional concepts of education, TQM has great advantages in developing the education system and in creating qualified individuals that can respond to the demands of society. Lack of experts in the business world can be solved by the constant improvement of the education system and this improvement seems to be impossible with a conventional education system that is very closed to the environment. The implementation of the TQM concept and its integration into the education system can be realized through different models and systems.

The concept of quality in education:

Applying the concept of total quality management in the educational system is completely normal because, exactly as in other social and economic domains, this sector tries to identify the most efficient methods in order to successfully get along with the continuous changes. Moreover, people who work in the educational system use the concept of total quality management to predict the possible problems that can occur in the future and to develop solutions for them. When we try to answer the concept of quality we have to answer two fundamental questions. The first one is: Which is the product? The second one is: Who are the clients? Both questions can be applied in the case of education.

Giving a definition for education is not easy at all. There are many possible assertions or answers regarding this subject but none of them can be considered as the definition of education. In many cases people tend to think that the students or pupils reflect the "quality" of the educational institution where they study. This statement is wrong. The quality in education, treated as "added value", has to happen at any level and it has to be underlined that it represents the basis of a national quality management.

The quality of education is mostly conditioned by the quality of the human resources, namely by the professional quality of the teachers. The minimum requirements to ensure the quality of teachers exist. The role of motivating and encouraging the maintenance of this professional quality, as well as its intelligent and efficient usage, is reflected in the institutional framework.

There are many personal qualities which a professor should have. His professional role supposes to accomplish several interconnected roles: he is an expert in the teaching-learning act, a motivating agent, a leader in relation with the group of pupils-students, a counselor, a role model, a reflexive professional, a manager. [7]

Total quality management. Theory and principles

Starting with these premises, it can be said that TQM is not something imposed. This concept does only determine the things to be correctly done from the very beginning. It can

be also used to check if during their implementation the process was undergone correctly or in a wrong direction. Education and professional development should be a priority of the policies of programs in each country. These should be strongly connected with the policies of qualitative formation and with the completion of employment. [2]

| | | | |
|------------|------------------------|-------------------------|-------------------|
| Objective | Continuous Improvement | | |
| Principles | Customer Focus | Process Improvement | Total Involvement |
| | Leadership | | |
| Elements | Education and Training | Supportive structure | |
| | Communications | Rewards and recognition | |

Fig. 1 The TQM system and its components

In order to identify and creatively solve the problems that appear in education there must be used some techniques and quality instruments. TQM allows the common use of a large variety of instruments and techniques, which support the implementation of its basic concepts. The idea behind these instruments and techniques can also be used in the service industry but also in education. Nowadays, on the educational market, it is often asked the question: Which are the factors that influence the fact that an institution is different from another? The curriculum is basically the same. It is about the added value that gives authenticity features to an institution.



Fig. 2 The hierarchy of quality

The Ishikawa diagram is a technique that has also been named „cause and effect” or „fish bone”. This technique gives the team the possibility to make graphic representations of all factors that affect the problem or the desired effect. The representation can be very well done using a brainstorming session. The goal is to make a list of all factors that affect the quality of a process and then to represent the relationship between them.

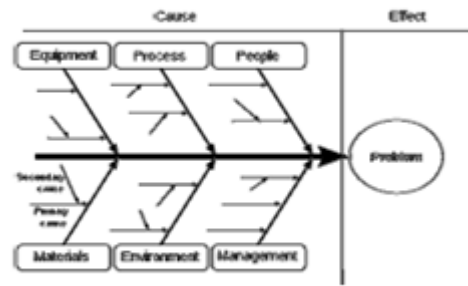


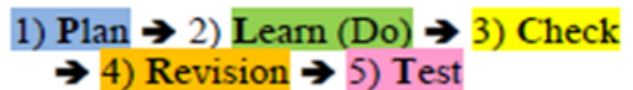
Fig. 3 Ishikawa diagram

Applying TQM into teaching and learning process

Totals Quality Management – TQM concept was introduced in 1940 by Dr. Edwards Deming. The customized elements of Total Quality Management are: „continuous improvement” and “applying to all organization”, and all processes involved strengthen the feedback loop. Applying TQM principle of continuous improvement of teaching quality requires a good understanding. Schauerman and Peachy [3] and Heverly [1] detailed some possible roadblocks of implementing TQM while teaching:

- Capability of educational institution to treat the student as client / beneficiary;
- Different approaches of educational institution covering the same disciplinary and teaching expertise;
- Different TQM approaches within educational institutions and recognition systems;
- Costs of forming as specialist into tqm applicability

In the traditional learning system, many students do not succeed to learn and more importantly they fail to access on to the highest level offered by the system. As an alternative thru TQM the student is planning, learning, checking, revising than testing.



The total quality management principles are very effective in business as well as in education. Mehrotra (2006) thinks that TQM principles can be helpful for the working at educational institutes by “redefining the role, purpose and responsibilities of schools. Schools should be improved as a way of life. Comprehensive leadership training at all the levels should be planed.

Total Quality Management in Education:

The globalization of education, student’s migration from one country to another are causes for concerns to educationists. The use of new teaching and learning methodologies, changing patterns of education delivery, course content, the concept of quality has become an essential component of the educational process for its success. Continuous improvement and self evaluation among stake holders such as top management, students, faculty etc is required and development and encouragement of leadership among the stake holders in the organization should be made as an ongoing process as well as a system. Synergistic relationship among faculty: students, Industry: Faculty and students:

Industries to ensure the strategic quality among various combinations are required.

The main goal of TQM is to create within the organization a climate in which all the resources are used creatively and efficiently and which gives the staff confidence in management.

Some features of total quality management are considered to be essential (Vinni,R.,2011): change, customer orientation, communication, continuous improvement, corrective measures, cost of poor quality, the organizational structure of network type in the process or case management, imagination, creativity, IT, organizational culture, team, orientation towards the future.

Introducing base principles of TQM in a university depends on the existence of an adequate quality culture of the entire staff. The institutional culture from the universities affects the application procedures in the context of quality strategies, although it does not appear directly but through its consequences. The culture integrates values, beliefs and behavior norms that have proved to be benefit for the university in its past and confer personality, fame and at the same time shape to the student life. That shape is the pleasure to learn. For example the well-known Oxford, Cambridge and Harvard universities have become famous not only through its academic results but also through its institutional culture. This shape matters a lot when appreciating those who have studied and have graduated from those universities.

The culture from a university represents its genetic environment, its unwritten but mandatory regulation. It is conservative through its nature and will oppose any innovation or major changes of management. And still, due to the major changes of our society even Harvard University is submitted to a continuous adaptation process which is done through a managerial system and through an adequate quality policy. Here where excellence in quality has represented and still represents the essence of university life. The re-establishment of a normal balance between the management of quality and institutional culture is done through:

- The implementation of new ways of thinking ;
- The implementation of strategic management;
- The implementation of quality management.

The new thinking models must be focused on dynamics intelligence and creativity. The development of new thinking models leads to the acceptance of changes as normal and natural phenomena of permanent adaptation to the social and economic environment. Intelligence allows obtaining some more preferment solutions and therefore the creativity leads to new things. Using such models of thinking the knowledge can be assessed more and thus the models of behavior allow the evolution of the values into an incentive and competitive climate. By implementing the strategic management an activation of the university and a protection of the developing needs on a period from 3 to 5 years are produced. The mission of the universities is obvious, the fundamental objectives over which all its energies should be concentrated. The third direction is the implementing of

quality management which has the role to arrange the specific activities of the university and to concentrate on the students requests who are clients. Applying the three ways of change an institutional culture will take place, meaning the passing from a culture based on mediocrity and bureaucracy to a culture which aims the excellence and the performance.(Hanson,J.,2003)

In Deming's view, schools do not require to depend on examinations to guarantee quality. If the quality of the teaching system is sufficiently taken into consideration, it will not be necessary to examine every student on every single item they have studied. In this way, the examinations may just represent a sample of the students in depth; hence, time and effort are saved and more accurate results are obtained. Therefore, examinations will turn into a diagnostic tool to assure the quality of the system rather than the quality of every single student. Finally, the teacher can now allocate more time to teaching the students who will be able to cover more material earlier and at lower tuition fees. Schools, hereby, can make even better competition in the education market (Wolk 2011). However, the followers of the Crosby (1995) model support the TQM in education and offer the following strategies:

- 1) Emphasize the quality of the teaching system rather than the results of the examinations.
- 2) As the name "total" implies, pay attention to all the constituents of the system.
- 3) Look for the factors affecting the exam failures and try to eliminate them at source.

Following the above teaching strategies can produce students who can pass their examinations. Hence, the number of failures will be down which means that less time and money will be wasted. Instead, the saved money can make the schools better compete in the education market.

2. Conclusion

The strategic outcomes of the TQM concept also include supporting academic programs with all types of resources, increasing student academic performance, and quality of education as a whole. In this way, TQM principles implemented in education are effective instruments of long-term strategic management and should be applied in order to obtain the appropriate competitive outcomes. Being a potential paradigm we can get benefits of TQM in educational institutions (schools, college & universities) in both public and private, as Schmoker and Wilson (1993); thinks: TQM can help a school or college 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 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. Institutional activities based on the TQM system provide all the necessary conditions to meet the needs of students in education and other closely related activities.

If the educational system experiences failure and produces a cadre of unsatisfactory quality, it would mean tracing all the resources of a society. Application of Total Quality Management in education will give better results in all fields of the process of education as a good technique of management used and proved giving excellent results in other industrial and business organizations (Akhtar, 2000). It is the provision of extraordinary customer's satisfaction (Akhtar, 1998- 99). It is based on the participatory management philosophy. It believes on never ending improvement through the collaborative efforts of members of the educational organization. TQM philosophy encourages the students, teachers and the employees for extraordinary performance (Akhtar, 2000).

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