TQM IS MAINLY CONCERNED WITH CONTINUOUS IMPROVEMENT IN ALL WORK

Prof.dr.Nedžad Repčić
Faculty of Mechanical Engineering University of Sarajevo,
71000 Sarajevo, Vilsonovo 9,
B&H

Key words: TQM, improvement, work

ABSTRACT

TQM is a management philosophy that seeks to integrate all organizational functions (marketing, finance, design, engineering, and production, customer service, etc.) to focus on meeting customer needs and organizational objectives. TQM views an organization as a collection of processes. It maintains that organizations must strive to continuously improve these processes by incorporating the knowledge and experiences of workers. The simple objective of TQM is "Do the right things, right the first time, every time". TQM is infinitely variable and adaptable. Although originally applied to manufacturing operations, and for a number of years only used in that area, TQM is now becoming recognized as a generic management tool, just as applicable in service and public sector organizations. Continuous improvement must deal not only with improving results, but more importantly with improving capabilities to produce better results in the future. The five major areas of focus for capability improvement are demand generation, supply generation, technology, operations and people capability. A central principle of TQM is that mistakes may be made by people, but most of them are caused, or at least permitted, by faulty systems and processes. This means that the root cause of such mistakes can be identified and eliminated, and repetition can be prevented by changing the process. There are a number of evolutionary strands, with different sectors creating their own versions from the common ancestor. TOM is mainly concerned with continuous improvement in all work, from high level strategic planning and decision-making, to detailed execution of work elements on the shop floor. It stems from the belief that mistakes can be avoided and defects can be prevented. It leads to continuously improving results, in all aspects of work, as a result of continuously improving capabilities, people, processes, technology and machine capabilities.

1. INTRODUCTION

A characteristic of many successful businesses (both online and off-line) is that they have a vision for their business. They know what they are working towards, and they are creating a business that will be like their vision of the future. It is always a good idea to stop every so often and reconsider what your vision is for your business. So how do you create a vision for your online business? The first step is to ask yourself what you really want to create with your business. Imagine the ideal business that you want to own. Do not be distracted by what is or is not possible and do not evaluate whether it will work. Just consider the possibilities and how aiming for what you want will be unique to you. Once you have imagined your ideal and have a vision of what you want, spend some time considering how you will make a difference. Will you be setting a standard of customer service that will be the envy of other businesses?

Will your product or service meet a need so fully that your customers will tell their friends and generate business for you? Will you be an inspiration to all those who come in contact

with you so that they will want to stay in contact and follow your recommendations? The list of how you can make a difference is endless. Make the time to develop your vision for your future online business success. Know what you want to achieve and ensure that all your actions are taking you in that direction. Listen to the feedback you receive and monitor the results you are achieving so that you can change tack if necessary as you move closer to your vision. Dare to be different and to make a difference with your online business. No one else will be able to copy it because it will be yours. Some people will be inspired by a desire to create something new and different. Others will want to create a second income. Some will want to create a new shopping experience for their customers while others will want to create new products or services that better meet the needs of people today.

2. FEASIBILITY STUDY FOR NEW PROGRAM

If you plan to start a new, major program in your organization, you should consider many of the same questions for starting a new business venture. The following feasibility study will guide you through these critical questions. The nonprofit environment has changed.

- > Community needs are growing in size and diversity.
- More nonprofits are competing for government and philanthropic funds.
- > Traditional forms of funding are becoming smaller and less reliable.
- New for-profit businesses are competing with nonprofits to serve community needs.
- > Funders and donors are demanding more accountability.

In the face of this new reality, an increasing number of forward-looking nonprofits are beginning to appreciate the increased revenue, focus and effectiveness that can come from adopting "for profit" business approaches.

Increasingly, they are reinventing themselves as social entrepreneurs, combining "the passion of a social mission with an image of business-like discipline, innovation, and determination." The concept of Total Quality Management (TQM) was developed by an American, W. Edwards Deming, after World War II for improving the production quality of goods and services. The concept was not taken seriously by Americans until the Japanese, who adopted it in 1950 to resurrect their postwar business and industry, used it to dominate world markets by 1980. By then most U.S. manufacturers had finally accepted that the nineteenth century assembly line factory model was outdated for the modern global economic markets.

The concept of TQM is applicable to academics. Many educators believe that the Deming's concept of TQM provides guiding principles for needed educational reform. In his article, "The Quality Revolution in Education," John Jay Bonstingl outlines the TQM principles he believes are most salient to education reform. He calls them the "Four Pillars of Total Quality Management."

3. SYNERGISTIC RELATIONSHIPS, IMPROVEMENT, SELF EVALUATION

According to this principle, an organization must focus, first and foremost, on its suppliers and customers. In a TQM organization, everyone is both a customer and supplier; this confusing concept emphasizes "the systematic nature of the work in which all are involved". In other words, teamwork and collaboration are essential. Traditionally, education has been prone to individual and departmental isolation. However, according to Bonstingl, this outdated practice no longer serves us: "When I close the classroom door, those kids are mine!" is a notion too narrow to survive in a world in which teamwork and collaboration result in high-quality benefits for the greatest number of people. The very application of the first pillar of TQM to education emphasizes the synergistic relationship between the "suppliers" and "customers". The concept of synergy suggests that performance and

production is enhanced by pooling the talent and experience of individuals. In a classroom, teacher-student teams are the equivalent of industry's front-line workers. The product of their successful work together is the development of the student's capabilities, interests, and character. In one sense, the student is the teacher's customer, as the recipient of educational services provided for the student's growth and improvement. Viewed in this way, the teacher and the school are suppliers of effective learning tools, environments, and systems to the student, who is the school's primary customer. The school is responsible for providing for the long-term educational welfare of students by teaching them how to learn and communicate in high-quality ways, how to access quality in their own work and in that of others, and how to invest in their own lifelong and life-wide learning processes by maximizing opportunities for growth in every aspect of daily life. In another sense, the student is also a worker, whose product is essentially his or her own continuous improvement and personal growth. The second pillar of TQM applied to education is the total dedication to continuous improvement, personally and collectively. Within a Total Quality school setting, administrators work collaboratively with their customers: teachers. Gone are the vestiges of "Scientific management"... whose watchwords were compliance, control and command. The foundations for this system were fear, intimidation, and an adversarial approach to problem-solving. Today it is in our best interest to encourage everyone's potential by dedicating ourselves to the continual improvement of our own abilities and those of the people with whom we work and live. Total Quality is, essentially, a win-win approach which works to everyone's ultimate advantage. According to Deming, no human being should ever evaluate another human being. Therefore, TQM emphasizes self-evaluation as part of a continuous improvement process. In addition, this principle also laminates to the focusing on students' strengths, individual learning styles, and different types of intelligences.

4. A SYSTEM OF ONGOING PROCESS, LEADERSHIP

The third pillar of TQM as applied in academics is the recognition of the organization as a system and the work done within the organization must be seen as an ongoing process. The primary implication of this principle is that individual students and teachers are less to blame for failure than the system in which they work. Quality speaks to working on the system, which must be examined to identify and eliminate the flawed processes that allow its participants to fail. Since systems are made up of processes, the improvements made in the quality of those processes largely determine the quality of the resulting product. In the new paradigm of learning, continual improvement of learning processes based on learning outcomes replaces the outdated "teach and test" mode. The fourth TQM principle applied to education is that the success of TQM is the responsibility of top management. The school teachers must establish the context in which students can best achieve their potential through the continuous improvement that results from teachers and students working together. Teachers who emphasize content area literacy and principle-centered teaching provide the leadership, framework, and tools necessary for continuous improvement in the learning process. According to the practical evidences, the TQM principles help the schools in following clauses:

- 1. Redefine the role, purpose and responsibilities of schools.
- 2. Improve schools as a "way of life."
- 3. Plan comprehensive leadership training for educators at all levels.
- 4. Create staff development that addresses the attitudes and beliefs of school staff.
- 5. Use research and practice-based information to guide both policy and practice.
- 6. Design comprehensive child-development initiatives that cut across a variety of agencies and institutions.

In order to achieve the above as opportunities to the academic scenario, in addition to patience, participatory management among well-trained and educated partners is crucial to the success of TQM in education; everyone involved must understand and believe in principles. Some personnel who are committed to the principles can facilitate success with TQM. Their vision and skills in leadership, management, interpersonal communication, problem solving and creative cooperation are important qualities for successful implementation of TQM.TQM is a management philosophy that seeks to integrate all organizational functions (marketing, finance, design, engineering, and production, customer service, etc.) to focus on meeting customer needs and organizational objectives. TQM views an organization as a collection of processes. It maintains that organizations must strive to continuously improve these processes by incorporating the knowledge and experiences of workers. The simple objective of TQM is "Do the right things, right the first time, every time". TQM is infinitely variable and adaptable. Although originally applied to manufacturing operations, and for a number of years only used in that area, TQM is now becoming recognized as a generic management tool, just as applicable in service and public sector organizations. There are a number of evolutionary strands, with different sectors creating their own versions from the common ancestor. TQM is the foundation for activities, which include: Commitment by senior management and all employees, Meeting customer requirements, Reducing development cycle times, Just In Time/Demand Flow Manufacturing, Improvement teams, Reducing product and service costs, Systems to facilitate improvement, Line Management ownership, Employee involvement and empowerment, Recognition and celebration, Challenging quantified goals and benchmarking, Focus on processes / improvement plans, Specific incorporation in strategic planning. This shows that TQM must be practiced in all activities, by all personnel, in Manufacturing, Marketing, Engineering, R&D, Sales, Purchasing, HR, etc.The 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.

5. THE CONCEPT OF CONTINUOUS IMPROVEMENT BY TQM

TQM is mainly concerned with continuous improvement in all work, from high level strategic planning and decision-making, to detailed execution of work elements on the shop floor. It stems from the belief that mistakes can be avoided and defects can be prevented. It leads to continuously improving results, in all aspects of work, as a result of continuously improving capabilities, people, processes, technology and machine capabilities. Continuous improvement must deal not only with improving results, but more importantly with improving capabilities to produce better results in the future. The five major areas of focus for capability improvement are demand generation, supply generation, technology, operations and people capability. A central principle of TQM is that mistakes may be made by people, but most of them are caused, or at least permitted, by faulty systems and processes.

This means that the root cause of such mistakes can be identified and eliminated, and repetition can be prevented by changing the process. There are three major mechanisms of prevention:

- 1. Preventing mistakes (defects) from occurring (Mistake proofing or Poka-Yoke).
- 2. Where mistakes can't be absolutely prevented, detecting them early to prevent them being passed down the value added chain (Inspection at source or by the next operation).

3. Where mistakes recur, stopping production until the process can be corrected, to prevent the production of more defects. (Stop in time).

A preliminary step in TQM implementation is to assess the organization's current reality. Relevant preconditions have to do with the organization's history, its current needs, precipitating events leading to TQM, and the existing employee quality of working life. If the current reality does not include important preconditions, TQM implementation should be delayed until the organization is in a state in which TQM is likely to succeed. If an organization has a track record of effective responsiveness to the environment, and if it has been able to successfully change the way it operates when needed, TQM will be easier to implement. If an organization has been historically reactive and has no skill at improving its operating systems, there will be both employee skepticism and a lack of skilled change agents. If this condition prevails, a comprehensive program of management and leadership development may be instituted. A management audit is a good assessment tool to identify current levels of organizational functioning and areas in need of change. An organization should be basically healthy before beginning TQM. If it has significant problems such as a very unstable funding base, weak administrative systems, lack of managerial skill, or poor employee morale, TQM would not be appropriate. However, a certain level of stress is probably desirable to initiate TOM. People need to feel a need for a change. Kanter (1983) addresses this phenomenon be describing building blocks which are present in effective organizational change. These forces include departures from tradition, a crisis or galvanizing event, strategic decisions, individual "prime movers," and action vehicles. Departures from tradition are activities, usually at lower levels of the organization, which occur when entrepreneurs move outside the normal ways of operating to solve a problem. A crisis, if it is not too disabling, can also help create a sense of urgency which can mobilize people to act. In the case of TQM, this may be a funding cut or threat, or demands from consumers or other stakeholders for improved quality of service. After a crisis, a leader may intervene strategically by articulating a new vision of the future to help the organization deal with it. A plan to implement TQM may be such a strategic decision. Such a leader may then become a prime mover, who takes charge in championing the new idea and showing others how it will help them get where they want to go. Finally, action vehicles are needed and mechanisms or structures to enable the change to occur and become institutionalized.Beckhard and Pritchard (1992) have outlined the basic steps in managing a transition to a new system such as TQM: identifying tasks to be done, creating necessary management structures, developing strategies for building commitment, designing mechanisms to communicate the change, and assigning resources. Task identification would include a study of present conditions (assessing current reality, as described above); assessing readiness, such as through a force field analysis; creating a model of the desired state, in this case, implementation of TQM; announcing the change goals to the organization; and assigning responsibilities and resources. This final step would include securing outside consultation and training and assigning someone within the organization to oversee the effort. This should be a responsibility of top management. In fact, the next step, designing transition management structures, is also a responsibility of top management. In fact, Cohen and Brand (1993) and Hyde (1992) assert that management must be heavily involved as leaders rather than relying on a separate staff person or function to shepherd the effort. An organization wide steering committee to oversee the effort may be appropriate. Developing commitment strategies was discussed above in the sections on resistance and on visionary leadership. To communicate the change, mechanisms beyond existing processes will need to be developed. Special all-staff meetings attended by executives, sometimes designed as input or dialog sessions, may be used to kick off the process, and TQM newsletters may be an effective ongoing communication tool to keep employees aware of activities and accomplishments. Management of resources for the change effort is important with TQM because outside consultants will almost always be

required. Choose consultants based on their prior relevant experience and their commitment to adapting the process to fit unique organizational needs. While consultants will be invaluable with initial training of staff and TQM system design, employees (management and others) should be actively involved in TQM implementation, perhaps after receiving training in change management which they can then pass on to other employees. A collaborative relationship with consultants and clear role definitions and specification of activities must be established. In summary, first assess preconditions and the current state of the organization to make sure the need for change is clear and that TQM is an appropriate strategy. Leadership styles and organizational culture must be congruent with TQM.

6.CONCLUSION

TQM encoureges participation amongst shop floor workers and managers. There is no single theoretical formalization of total quality, but Deming, Juran and Ishikawa provide the core assumptions, as a "...discipline and philosophy of management which institutionalizes planned and continuous... improvement ... and assumes that quality is the outcome of all activities that take place within an organization; that all functions and all employees have to participate in the improvement process; that organizations need both quality systems and a quality culture.". Use input from stakeholder (clients, referring agencies, funding sources, etc.) as possible; and, of course, maximize employee involvement in design of the system. Always keep in mind that TQM should be purpose driven. Be clear on the organization's vision for the future and stay focused on it. TQM can be a powerful technique for unleashing employee creativity and potential, reducing bureaucracy and costs, and improving service to clients and the community. If they are not, this should be worked on or TQM implementation should be avoided or delayed until favorable conditions exist.Remember that this will be a difficult, comprehensive, and long-term process. Leaders will need to maintain their commitment, keep the process visible, provide necessary support, and hold people accountable for results. Total Quality Management, TQM, is a method by which management and employees can become involved in the continuous improvement of the production of goods and services. It is a combination of quality and management tools aimed at increasing business and reducing losses due to wasteful practices. Some of the companies who have implemented TQM include Ford Motor Company, Phillips Semiconductor, SGL Carbon, Motorola and Toyota Motor Company.

7. REFERENCES

- [1] Ishikawa, K.: What is Total Quality Control? The Japanese way. Englewood Cliffs, New Jersey, Prentice-Hall, 2001.
- [2] Martin, L.: Total Quality Management in the Public Sector, National Productivity Review, 2003.
- [3] Hyde, A.: The Proverbs of Total Quality Management, Productivity and Management Review, 2000.
- [4] Hill,S.: Why Quality Circles failed but Total Quality management might succeed, British journal of industrial relations, 2002.
- [5] Web sites http:// www / science / engineering / design / quality / product / management.
- [6] Standardi: ISO, DIN, EN, BAS EN ISO.