

# Total Quality management (TQM) and Continuous Improvement as Addressed by Researchers

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**Abstract-** Total quality Management as a philosophy seeking to integrate all organizational functions in all areas of productions and services become an important attractive research field. It encourage Researchers to address many topics related to Total Quality management and Continuous improvements. Each has his own approach. Each reveals findings and results. This paper is a comparative analysis of some of the researchers approaches concerning Total quality Management Applications, Models, principles and aims.

**Index Terms-** Applying Total Quality Management - Baldrige Model - E- learning frame work – Kirkpatrick models

## I. INTRODUCTION

Researchers in the field of Total quality management are usually seeking to find models and theories for continuous improvement. Here is an analysis some work produced in this field, to prove that, all targets and aims are achieved by relying on the same base and principles. Terms may differ from researcher to another, but the result is produced from the same ground.

## II. RESEARCH ELABORATIONS

### 1. Comparison between Total Quality Management (TQM) Framework for e-learning based on EFQM and Kirkpatrick models - by Jeanne Schreurs – Universiteit Hasselt, Diepenbeek,Belgium- (2006) and Applying Total Quality Management in Academics- by Dheeraj Mehrotra (March 2010):-

Jeanne Schreurs identifies the EFQM Excellence model as “a famous quality Management tool”, which has been translated to be useful in e-learning quality Management. She describes how she developed the e-learning stakeholder model. She presented the Kirkpatrick model of e-learning and developed Kirkpatrick-EFQM self-assessment framework.

To take the challenge to support and enhance quality management in e-learning, Jeanne Schreurs defined quality, and find the way to assess it, and embed it in the existing operational procedures of the learning organisation. She could determine the kind of quality management system which has to be implemented. She focused in her paper on the assessment of quality.

Schreurs argues that the way to become an excellent learning department is by balancing and satisfying the needs of

all stakeholders. The subject which is asserted by Dheeraj Mehrotra (March ,2010) in his paper about applying Total quality Management in academics. Where he explains four pillars of Total Quality Management.

He argues in principle number 1 “Synergistic relationships” how essential is the focus on suppliers and customers- which are relevant to stakeholders in Jane Schereurs paper- as well as the teamwork and collaboration.

Schereurs maintains the strategy of continuous learning , innovation and improvement to achieve excellence. This correlate with principle number 2 by Dheeraj Mehrotra (March ,2010) which is “Continuous improvement and self-evaluation”; where continual improvement of personnel abilities is highlighted as well as the win-win approach in Total quality Management .

Believing in Deming rule by Dheeraj Mehrotra (March ,2010) that “no human being should ever evaluate another human being” and that we should have a self-evaluation as part of improvement process; Jane Schereurs reveals the EFQM model as a tool of quality assessment which enable the organisation to identify its strengths and weaknesses , benchmark with other organisations , and identify areas for improvement.

As the fourth principle of Total quality management in academic by Dheeraj Mehrotra (March ,2010) is Leadership, and the insists of top management success responsibility ; Schereurs guarantees leadership, Policy and strategy , resources , and processes as enabler criterion of the EFQM Model in the E-learning Organization . She recommends the result criterion to be Client satisfaction, People satisfaction, impact on society, and impact on the company’s success.

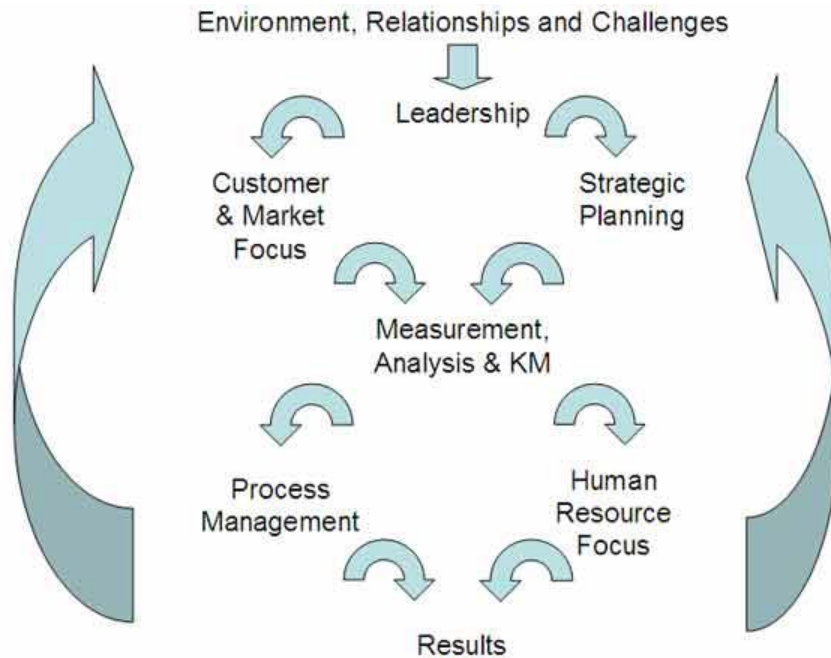
Schereurs discussed Kirkpatrick Evaluation model, to prove that it is self-evaluation model, which is composed of four levels of quality evaluation. Then, she merged the EFQM total quality model (TQM) for e-learning with Kirkpatrick model to have a “Kirkpatrick-EFQM self-assessment framework”, through which, the internal stakeholders of the company shall assess the quality of e-learning activity.

Thus, when we compare the two studies, we can realise that, following the four principles of introducing Total quality management to academics, can guarantees having new assessment models to assure total quality management, and to uphold the continuous improvement for both traditional and virtual learning.

### 2. Baldrige Model by Denis Leonard and Bill Denney,2007 and Total quality Management (TQM) Principles by Kurram Hashmi, 2010:-

If we look back to the mid of 1990's we can find the "Baldrige Model" where the strategic flow starts with leadership and ends with results. Through the figure below (fig.1), we realise that, Organizations will never make large improvement,

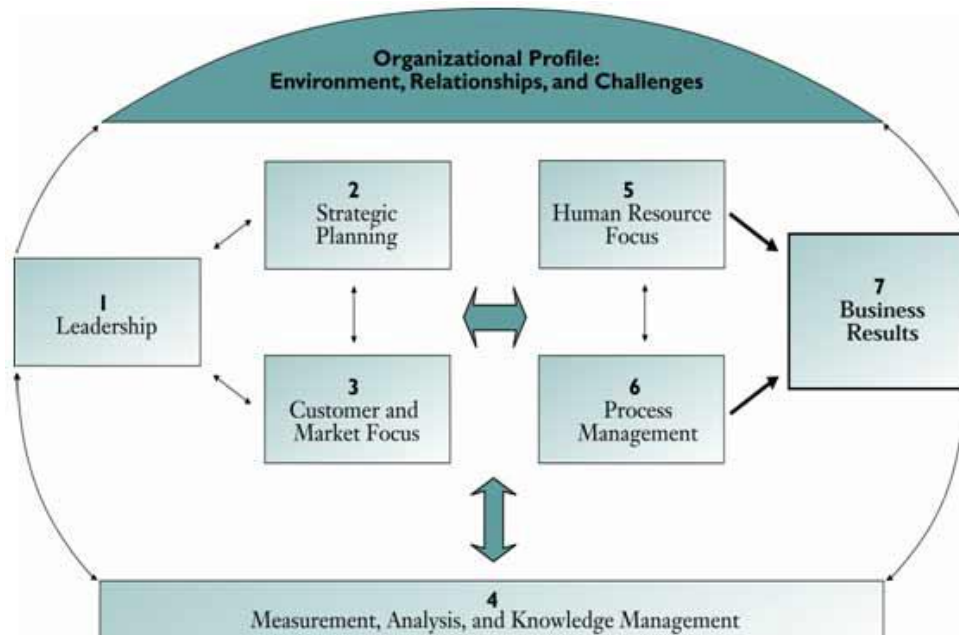
unless senior leadership is actually engaged, to get a wave of reactions all over the organization, to achieve continuous improvement .



(fig.1) Baldrige Leadership flow

While the traditional Baldrige model (Figure 2) shows the link from the leadership triad (leadership, planning, and customer focus) to the results triad (staff, processes, and results) and how measurements affect both, as well as, giving a basic view of how

all the pieces fit together, to assert that, It's a systems view of the criteria and how they penetrate the entire organization.



(fig.2) Baldrige Model

The Education Criteria in Baldrige model, maintained by “Denis Leonard and Bill Denney” in paper about “Aspects of Baldrige – Valuable perspectives” – Published in *Quality Digest’s Quality Insider*, July 2007, are a set of questions about seven critical aspects of managing and performing as an organization:

1. Leadership
2. Strategic planning
3. Customer focus
4. Measurement, analysis, and knowledge management
5. Workforce focus
6. Operations focus
7. Results

These questions work together as a unique, integrated performance management framework. Answering the questions helps to:-

- align resources;
- identify strengths and opportunities for improvement;
- improve communication, productivity, and effectiveness; and
- achieve strategic goals.

As a result,

- ever-improving value is delivered to students, other customers, and stakeholders, which contributes to organizational sustainability.
- Organization’s overall effectiveness and capability is improved.
- Organization improves and learns.
- Workforce members learn and grow.

In other hand, Khurram Hashmi (March 16,2010),in his paper “Introduction and Implementation of Total quality Management” guarantees that Total Quality Management is mainly concerned with continuous improvement in all work starting from strategic planning and decision making till the executive work elements. Also, he argues that the key principles of TQM are:-

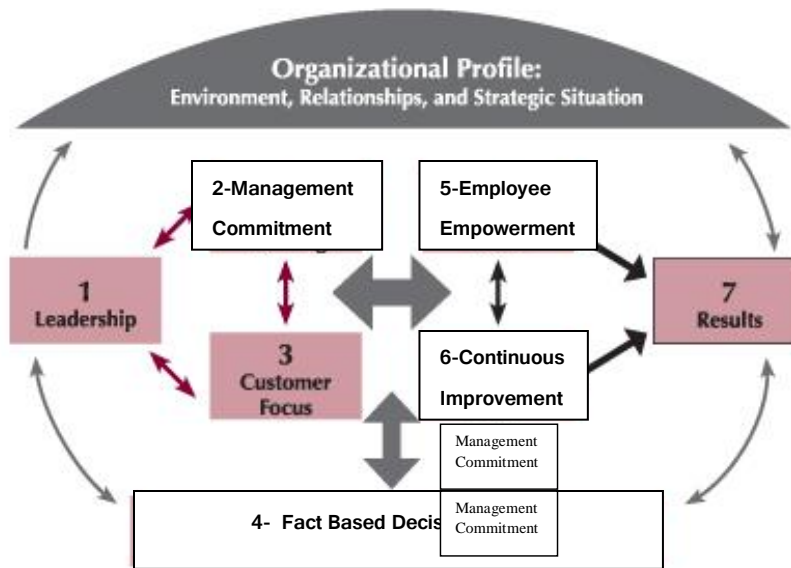
- 1- Management Commitment:-
  - Plan (drive , direct)

- Do (deploy, support ,participate)
  - Check (review)
  - Act (recognize, communicate, revise)
- 2- Employee empowerment:-
    - Training
    - Suggestion scheme
    - Measurement and recognition
    - Excellence teams
  - 3- Fact based decision making
    - SPC (statistical Process Control)
    - DOE,FMEA
    - The 7 statistical tools
    - TOPS (Ford 8D –team –oriented problem solving)
  - 4- Continuous improvement:-
    - Systematic measurement and focus on CONQ
    - Excellence team
    - Cross functional process management
    - Attain, Maintain, improve standards
  - 5- Customer focus:-
    - Supplier partnership
    - Service relationship with internal customer
    - Never compromise quality
    - Customer driven standards

### III. FINDINGS

Total quality Management principles and Baldrige model and the TQM frame work for e-learning based on EFQM and Kirkpatrick models , all have the same target to achieve, while each claims different approach, starting from the same base of principles.

If we draw a figure for the previous principles of Total quality Management we will have the following (fig.3) which is similar to Baldrige model.



(fig.3) Principles of TQM

#### IV. CONCLUSION

In spite of the different approaches to address Total Quality Management(TQM) implementations and applications, researchers insist that to achieve excellence, top management should be involved in the application of quality. They strongly believe that all functions, all employees should participate in the improvement process. They reveal the importance of evaluation to achieve continuous improvement.

Theories and models in the field of Total Quality Management start from the same base of principles and end to same results (the importance of teamwork and continuous improvement...etc) but in different approaches.

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