

The Investigation On Sustainability Of Total Quality Management In Higher Education Through Deming's Pdca Cycle

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Abstract

Total Quality Management (TQM) is an approach that seeks to improve quality and performance which will meet or exceed customer expectations. This can be achieved by integrating all quality-related functions and processes throughout the organizations. Total Quality Management (TQM) is an integrated organizational effort designed to improve quality at every level. In a TQM effort, participation of all members of an organization is very important about sustainability. The term sustainability has become popular in policy-oriented research as an expression of what public policies ought to achieve. According to Brundtland, sustainable development is development that meets the needs of the present without compromising the needs of future generations to meet their own needs. Sustainability management, the ability to direct the course of a company, community, organization, or country in ways that restore and enhance all forms of capital (human, natural, manufactured, and financial) to generate stakeholder value and contribute to the well-being of current and future generations. TQM as a management system could be expanded to include components of sustainability.

The methods for implementing this approach come from the teachings of such quality leaders as Philip B. Crosby, W. Edwards Deming, Armand V. Feigenbaum, Kaoru Ishikawa and Joseph M. Juran. For example W. Edwards Deming in the 1950's proposed that business processes should be analyzed and measured to identify sources of variations that cause products to deviate from customer requirements. Deming created a (rather oversimplified) diagram to illustrate this continuous process, commonly known as the PDCA cycle for Plan, Do, Check, Act.

In higher education, this study is aimed that offering sustainability of quality education among the most important goals for university strives to achieve. Moreover the purpose of this study is to increase the degree of quality awareness, practice, and appreciation of using PDCA cycle in higher education. As a result, in this study it is mentioned about relationship between sustainability of total quality management in higher education using by PDCA cycle technique.

Keywords: Total Quality Management, PDCA Cycle, Sustainability, Sustainability Management, Higher Education

1.DEFINING OF QUALITY, TOTAL QUALITY MANAGEMENT, DEMING CYCLE AND SUSTAINABILITY

The concept of "quality" has been contemplated throughout history and continues to be a topic of intense interest today. Quality presently is addressed in numerous academic and trade publications, by the media, and in training seminars; it is perhaps the most frequently repeated man-tra among managers and executives in contemporary organizations. In a recent survey, executives ranked the improvement of service and product quality as the most critical challenge facing U.S. businesses (Zeithaml, V. A., Parasuraman, A., & Berry, L. L. 1990.).

Quality has been described as "the single most important force leading to the economic growth of companies in international markets"(Feigenbaum, A. V. 1982)

“TQM is a structured attempt to re-focus the organisation’s behaviour, planning and working practices towards a culture which is employee driven, problem solving, stakeholder oriented, values integrity, and open and fear free. Furthermore, the organisation’s business practices are based on seeking continuous improvement, the devolution of decision making, the removal of functional barriers, the eradication of sources of error, teamwork, honesty, and fact-based decision making”(Ghobadian and Gallear, 1996)

TQM is a management system consisting of values, methodologies and tools aimed at satisfying or preferably exceeding the needs and expectations of the customers with a reduced amount of resources. (Bergman & Klefsjö, 2003).

The founders of modern quality management and organization excellence - Crosby, Demings and Juran among others - considered ethics, principles and respect for people as key principles. For example, Crosby (1986) stated that: “the organizations will prosper only when all employees feel the same way and when neither customers nor employees will be hassled”. Deming’s (1986) 14 points highlighted the “driving out of fear”. He advocated an organizational climate where dealings between managers, employees and customers were conducted on an ethical basis. (Crosby, P. (1986)

1.1.Deming Key Principles

- 1."Create constancy of purpose towards improvement". Replace short-term reaction with long-term planning.
- 2."Adopt the new philosophy". The implication is that management should actually adopt his philosophy, rather than merely expect the workforce to do so.
- 3."Cease dependence on inspection". If variation is reduced, there is no need to inspect manufactured items for defects, because there won't be any.
- 4."Move towards a single supplier for any one item." Multiple suppliers mean variation

- between feedstocks.
5. "Improve constantly and forever". Constantly strive to reduce variation.
 6. "Institute training on the job". If people are inadequately trained, they will not all work the same way, and this will introduce variation.
 7. "Institute leadership". Deming makes a distinction between leadership and mere supervision. The latter is quota- and target-based.
 8. "Drive out fear". Deming sees management by fear as counter-productive in the long term, because it prevents workers from acting in the organisation's best interests.
 9. "Break down barriers between departments". Another idea central to TQM is the concept of the 'internal customer', that each department serves not the management, but the other departments that use its outputs.
 10. "Eliminate slogans". Another central TQM idea is that it's not people who make most mistakes - it's the process they are working within. Harassing the workforce without improving the processes they use is counter-productive.
 11. "Eliminate management by objectives". Deming saw production targets as encouraging the delivery of poor-quality goods.
 12. "Remove barriers to pride of workmanship". Many of the other problems outlined reduce worker satisfaction.
 13. "Institute education and self-improvement".
 14. "The transformation is everyone's job".

The Deming Cycle

W. Edwards Deming in the 1950's proposed that business processes should be analyzed and measured to identify sources of variations that cause products to deviate from customer requirements. He recommended that business processes be placed in a continuous feedback loop so that managers can identify and change the parts of the process that need improvements. As a teacher, Deming created a (rather oversimplified) diagram to illustrate this continuous process, commonly known as the PDCA cycle for Plan, Do, Check, Act:

PLAN: Design or revise business process components to improve results

DO: Implement the plan and measure its performance

CHECK: Assess the measurements and report the results to decision makers

ACT: Decide on changes needed to improve the process (Tague, 2005)

Deming's PDCA cycle can be illustrated as follows:

Deming's focus was on industrial production processes, and the level of improvements he sought were on the level of production. In the modern post-industrial company, these kinds of improvements are still needed but the real performance drivers often occur on the level of business strategy. Strategic deployment is another process, but it has relatively longer-term variations because large companies cannot change as rapidly as small business units. Still, strategic initiatives can and should be placed in a feedback loop, complete with

measurements and planning linked in a PDCA cycle. To illustrate the relationship of business unit processes to strategic processes, we may construct two nested PDCA cycles:

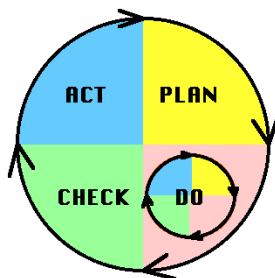


Figure 1: PDCA Cycle

This 'wheel within a wheel' describes the relationship between strategic management and business unit management in a large company. There are actually several separate business units, of course, each with its own set of metrics, goals, targets and initiatives. But this figure illustrates the idea that the business activities constitute the DO part of the overall strategic effort. (Tague, 2005)

1.2. Definition of Sustainability

According to Brundtland (1987): This is the most commonly quoted definition and it aims to be more comprehensive than most: Sustainable development is development that meets the needs of the present without compromising the needs of future generations to meet their own needs. It contains within it two key concepts: The concepts of needs, in particular the essential needs of the world's poor, to which overriding priority should be given, and: The idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.

2. SUSTAINABILITY OF TOTAL QUALITY MANAGEMENT IN HIGHER EDUCATION

In this study at first, factors of quality in higher education are determined. These factors are; students, lecturers, management, physical conditions, social life on campus, career planning and shareholders. To improve quality in higher education, it can be used PDCA cycle. In this context when PDCA cycle is analysed, the first stage is plan. In this stage:

Plan: At first, quality improving team are created and then sub-quality improving team are created. To improve each factors of quality in higher education, the following are planned.

- Students: increasing the success, socialization and motivation
- Lecturers: increasing job satisfaction and institutional commitment, supporting (Project, study..)
- Physical Conditions: tracking technology, improving quality life in campus, studies for students with disabilities (on-campus transportation, row, lift...)

- Management: supporting projects and studies, increasing motivation of personnel and students
- Social Life on Campus: increasing sports activities and artistic works (theatre, concert...) increasing the activity of club works.
- Career Planning: raising awareness of students about career planning, leading to students
- Shareholders: the creation of public and private sector cooperation, meeting of students and industry managers with career days, sectoral promotion, providing internship opportunities.

When this study is applied, in the stage of “DO”; the above mentioned plans are carried out, in the stage of “CHECK”; plans and actualized are compared, in the stage of “ACT” as a result of comparison, the necessary arrangements will be made.

3.CONCLUSION

In this study, to improve quality in higher education, with Deming’s PDCA cycle, sustainable total quality management in higher education is aimed. Deming’s PDCA cycle has four stages. These are “Plan”, “Do”, “Check” and “Act”. When all phases occurs, their sustainability will be provided by making the necessary changes in future periods. So, students, lecturers, physical conditions, management, social life on campus, career planning and shareholders such factors’ quality will be increased. In this context, university’s quality standard will be increased and it will contribute to positive image of university. This study which is fulfilled the stage of “Plan” (Deming’s PDCA cycle), in the future period will be able to improve in terms of the other stages Deming’

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