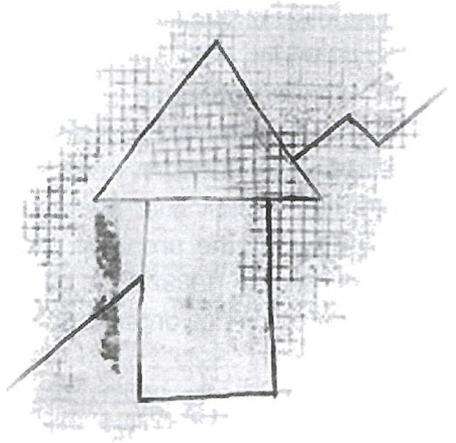


A New Strategy for Higher Education
Institutions: the deming management method

Thanos Kriemadis

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A New Strategy for Higher Education Institutions: the deming management method



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Introduction

The quality message has dominated corporate thinking worldwide. The impressive attention to quality led to the development of the Japanese Deming Award, the Malcolm Baldrige National Quality Award (with applications in education) in USA, the European Quality Award (with application in education) and a great number of National Quality Awards (with application in education). Also, an increasing number of private and public organizations around the world, including educational organizations, are now obtaining certification in ISO 9000, QS-9000, and ISO 14001-environmental standards (Hunt, 1993; Oakland, 1999; Joiner, 1994).

According to Wilkinson, Redman, Snape and Marchington (1998), quality management and quality improvement practices are increasingly being adopted both in the USA and in Europe, because they can add value to an organization's competitive strategy. Organizations which have implemented quality management and quality improvement practices did improve corporate performance, and in particular, improved quality of products/services, customer satisfaction and employee relations, and decreased costs at the same time (General Accounting Office, 1991; Hiam, 1993; Mohrman, Tenkasi, Lawler, and Ledford, 1995; Powell, 1995; Cruise and Voss, 1992; Witcher, 1993; Witcher and Whyte, 1992;).

The Deming Management Method, which is a quality management method, has caused several significant changes in American, Japanese and European management practices applied in both profit and nonprofit sectors (multinational corporations, manufacturing plants, military industry,

and services such as health, education, banking and insurance, and small businesses). Deming (1986) believed that "transformation is required in government, industry, and education" (p. 14).

Higher education institutions have been described as organized anarchies with unclear goals (Cohen and March, 1984). Many authors found that management systems derived from the business sector, such as strategic planning and entrepreneurial leadership could be offered as solutions to the problems the higher education institutions face (Keller, 1983; Tierney, 1988; Peck, 1983). Deming (1986) advocated that his method applies to service organizations including education.

Purpose of the Study

The purpose of this study is to examine the extent to which the 14 points of the Deming Management Method, which stems from the private business sector, can be applied to the management of the higher education institutions and the contribution of the implementation of the Deming Management Method to the enhancement of quality of higher education institutions.

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Analysis of the 14 Points of Deming's Theory

1. Create constancy of purpose toward improvement of product and service with the aim to become competitive, to stay in business, and to provide jobs.

Establishing constancy of purpose means: (a) developing the mission, vision, strategy and objectives of the organization; (b) innovation: the company should develop new products/services that will help improve the standard of living of mankind, and that will have a market; (c) continuous process improvement in the design and performance of already existing products/services; and (d) put resources into research and education (Deming, 1994; Aguayo, 1990).

Deming's Point one is relevant to the management of higher education institutions in terms of its emphasis on innovation (developing new services, new courses, new delivery methods such as distance learning, new markets), improvement of existing courses or services, research, and education. It requires leadership, commitment of energy and resources, and faculty that are convinced of the need for change. A quality-oriented higher education institution will have the following elements:

- ❑ a customer-driven strategy focused on meeting the needs of both internal and external customers, as well as process-oriented strategy (not just management by objectives)
- ❑ an organization designed around teams
- ❑ challenging goals
- ❑ systematic daily management of the institution using effective tools for feedback and measurement (Murgatroyd and Morgan, 1993).

2. Adopt the new philosophy because we can no longer live with commonly accepted levels of delays, mistakes, defective methods, processes and systems.

According to Swift, Ross, and Omachonu (1998), the modern era demands ever-increasing quality as a means for survival and global competitiveness. The Deming Management Method is a holistic philosophy which promotes the new culture of quality and must be adopted in its entirety if it is to bring about significant improvements in the organization and contribute to its survival and growth. The Deming Management Method has to be learned by all members of the company (employees, top managers, suppliers). The old management method nurtured competition among the members of the organization. The Deming Management Method fosters cooperation within the organization so that everyone can win (Deming, 1994).

To incorporate Deming's Point Two into the management of the higher education institution, the institution should work on the following areas:

- ❑ establish goals for quality improvement and develop quality systems, thus creating a learning and continuously improving organization
- ❑ developing relationships of openness and trust
- ❑ building collaboration and teamwork (among employees or/and departments within the organization)
- ❑ managing by fact (using statistical evidence)
- ❑ supporting results through recognition and rewards (Schmidt and Finnigan, 1993).

3. Cease dependence on mass inspection. Apply, instead, statistical evidence that quality is built in.

According to Scherkenbach (1992), the old expensive way of doing business is to try to manage the outcomes by detecting defects. Detection of defects is accomplished by the method of mass inspection, sending the

supposedly good product on to the customer, while either scrapping or reworking the supposedly bad product. The company might be able to give the customer good quality product/service, but it will be at a relatively high cost. Inspection does not improve or add quality but tells you if quality is there, and it is an expensive and often unreliable way of doing business. The company must pay the inspectors as well as to correct the mistakes that they find.

Instead of dependence on mass inspection of the outcomes after they were made, the prevention use of the process incorporates feedback from the process itself and from the customer to change the process inputs before the outcomes are produced. Deming believed, according to Aguayo (1990), that inspection will not identify problems built into the system. The organization must take the necessary steps to transform the whole company so that continuous improvement becomes a way of life. The long-term solution would be to work with suppliers to improve quality at the source or to find a supplier who is serious about quality.

Deming's Point Three has some relevance and application at the present time to the operation of higher education institutions, due to the fact that state legislation mandate mass-inspection-type assessment procedures.

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4. End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long term relationship of loyalty and trust.

Deming believed that a long-term relationship of loyalty and trust with a single supplier for any one item is imperative because variation between lots from two suppliers causes problems in production, impairs quality and increases the costs (Walton 1986).

Deming's Point Four has direct relevance and application to the purchasing processes of the higher education institution related to educational materials, equipments, and other supplies necessary for the operations of the institution. In higher education, Deming also considered suppliers the secondary schools which provide students to the higher education institutions. Although it is unrealistic to expect higher education institutions to reduce its suppliers of students (the suppliers of a university program are primarily the secondary schools), the effective application of the Deming Management Method Point Four requires the establishment of long-term relationships with secondary schools to improve the quality of education. Higher education institutions and secondary schools may communicate each

other needs (educational, administrative, etc.), and determine goals for improving processes (planning processes, evaluating processes, teaching and learning processes, promotion processes of educational programs, etc.). However, there are limitations given the nature of the higher education, the relative degrees of management control and government regulations.

5. Improve constantly and forever the system of production and service to improve quality and productivity, and thus constantly decrease costs.

Deming believed that every activity is a process and can be improved. The Deming Cycle of continuous improvement will help management to meet its obligation which is to improve continually. Deming Cycle includes the following steps:

- organize a team (usually cross-functional),
- study the process which needs improvement
- collect information-data from customers and employees
- decide what change will improve the existing situation
- make the change on a small scale
- check the results
- implement the improved process (Gabor, 1990).

Deming's Point Five has direct relevance and application to higher education institutions. Administrators should continually examine all processes of the institution (administrative, teaching and learning, research, etc.) to determine factors which result in decreasing the quality of all services (educational and non-educational) offered by the institution. It is possible to apply Point Five and realize benefits for all stakeholders such as students, faculty, employers, administrators and society.

6. Institute training on the job.

Education involves teaching critical thinking, collecting facts, analyzing and synthesizing ideas, and develops the ability to solve problems. Training is learning how to do a certain task or job. Training is used to complement and not to replace the educational process. Deming (1986) emphasizes the importance of on-the-job training rather than expecting employees to learn their jobs from their co-workers or from printed materials that may be difficult to read and understand. Deming also advocated, according to Latzko and Saunders (1995), that management needs training to learn about the company all the way from incoming materials to customer.

Deming's Point Six has direct relevance and application to higher education institutions. Training programs should be designed to meet the needs of the faculty, administrators, and support staff. Junior faculty need guidance in the development of pedagogical and teaching skills through mentoring programs from senior faculty, and special workshops designed for faculty development. Through training the quality and productivity of academic and non-academic staff will increase (Hunt, 1993; Spanbauer, 1992; Beare, Caldwell and Millikan, 1989).

7. Institute leadership.

Deming asserted that supervisors ensure that employees comply with orders while leaders assist employees by coaching and by arranging for training when needed. For top management, leadership means building the system on the basis of the principles of quality management (Sashkin and Kiser, 1993).

A leader must be concerned with people. Teamwork is the key to success and everyone should be involved in the decision making process. The leader's task is to enable employees to succeed at their work (Rosen, 1996).

Deming's Point Seven has direct relevance and application to higher education institutions. Top management as well as all employees should develop and implement the new leadership principles. At least five of the fourteen Points of Deming's Management Method relate to the leader's responsibility (the top management of the higher education institution) to employees:

- Point Six - Institute training on the job
- Point Eight - Drive out fear and empower employees
- Point Nine - Break down barriers between departments
- Point Eleven - Eliminate numerical quotas
- Point Twelve - Eliminate barriers to pride in workmanship
- Point Thirteen - Institute a vigorous program of education.

8. Drive out fear so that everyone may work effectively for the organization.

Existence of fear in a work setting can result in poor morale, poor productivity, reluctance to take risks, ineffective communication, stifling of creativity, and a reluctance to work for the best interests of the organization (Gitlow and Gitlow, 1987). Employees should not be afraid to point out problems, to report broken equipment, to ask for additional

instructions, to suggest new ideas, to call attention to conditions that interfere with quality (Walton, 1986).

Deming (1986) pointed out that fear will disappear as management improves and as employees develop confidence in management. For change to occur, commitment toward continuous improvement needs to come from top level management and subsequently influence every unit of the organization.

Deming's Point Eight has direct relevance and application to higher education institutions. In order to build a high-performing and healthy higher education institution, management should provide a working environment characterized by trust, openness, participation in decision making, effective communication, respect, learning, creativity in problem solving and continuous improvement.

9. Break down barriers between departments within the organization, and thus increase cooperation, communication and organizational effectiveness.

Deming (1994) stressed that every organization should be considered as a system and must be organized for the best overall performance, which requires that every part of the system has to cooperate for the benefit of the system. Deming (1986) advised that every company should build a system for win-win and this means cooperation among departments and employees, encouraging employee involvement in multi-departmental activities (planning, self-assessment, improvement activities) and information sharing. Team work requires one to compensate with his strength someone else's weaknesses.

Deming's Point Nine is applicable to higher education institutions. Eliminating barriers between departments/units and employees within the institution, will increase the quality of services (educational and non educational services) to students and will promote more efficient and effective use of resources.

10. Eliminate slogans, exhortations, and targets for the workforce asking for zero defects and new levels for productivity. Such exhortations only create adversarial relationships, as the bulk of the causes of low productivity and low quality belong to the system, and thus lie beyond the power of the workforce.

Deming (1986) advocated that management must understand that

quality and increased productivity are the responsibility of management. Establishing goals and make them slogans, without methods and tools for reaching them, is useless.

Due to the nature of the academic environment and the composition of the workforce, Deming's Point Ten has limited applicability to a higher education institution. The use of slogans in higher education institutions serves as an effective means for establishing and marketing the image or the purpose of the institution.

11. Eliminate work standards that prescribe numerical quotas and management by objectives. Substitute leadership (Deming, 1986).

According to Sashkin and Kiser (1993), numerical quotas encourage employees to ignore quality. The goal is to meet or exceed the quota at any cost and regardless of quality. Goals must focus on quality issues, not on numbers produced. Any time you focus on the outcomes and not on the process, according to Scherkenbach (1992), you limit your ability to meet your customers' needs at a price they are willing to pay. Deming advocated the elimination of quotas for both employees and management. He called for elimination of arbitrary goals to increase productivity or decrease costs by 10% without a method for doing so. Instead of establishing quotas, which lower productivity, quality, and morale, Deming recommended that managers should try to improve the system and give support to employees.

Deming's Point Eleven is directly applicable to higher education institutions because the establishment of quotas exists in academic programs and has a negative effect on morale, quality, and productivity of both academic and non-academic personnel (for example, teaching and research requirements for academic staff and performance requirements for students). Instead, the goal should be the creation of an improved system and a more positive working environment, which requires focusing not on numerical outcomes but on delivering a quality service to internal and external customers.

12. Remove barriers that rob the employee of his right to pride of workmanship.

Deming believed, according to Gabor (1990), that the time-honored system of performance appraisals, bonuses, and other reward systems that encourage constant competition in the ranks are unfair and harmful to the

interest of both companies and employees, because these systems:

- (a) cultivate short term performance
- (b) annihilate long term planning
- (c) build fear
- (d) demolish teamwork
- (e) nourish rivalry and politics

The performance appraisal and the management by objectives focus on the end products and not on methods (Deming, 1986).

Deming's Point 12 has some application to higher education institutions because there is inadequate evidence that eliminating performance appraisal would result in improved performance.

13. Institute a vigorous program of education and self-improvement.

Deming advocated the establishment of a vigorous program of education and self-improvement for every employee in the organization so that to help the system improve itself

Deming's Point 13 has direct relevance to higher education institutions These employees (administrators, academic staff, technical support staff, etc) who are upgrading their skills continually are able to improve the system and thus increase the quality and productivity of the organization.

14. Take action to accomplish the transformation.

Deming (1986) advised that top management should organize itself as a team to advance the above 13 points. It is the responsibility of top management to take action to accomplish the transformation. All employees should contribute to this transformation.

Conclusions

Higher education institutions can, and should, implement some aspects of the Deming Management Method but there are several areas of concern which this paper addresses. However, we must point out that the implementation of the Deming's Management Method could transform the higher education institution to a quality oriented institution and provide benefits to students, faculty, administration, prospective employers and the society in general. The implementation of the Deming Management Method will ensure that the quality oriented higher education institution knows its

purpose (it exists to provide a quality educational service which will help improve the standard of living of the mankind), serves its external customers (students and employers, mainly) as well as its internal customers (administrative and academic personnel) focused on the values of respect, openness, and trust, empowers its staff to continually improve the system with the collaboration of all stakeholders.

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