Individual Assignment
On

The contribution of Deming and Crosby theories to the understanding of TQM

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I. Introduction

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. There are many philosophers’ theories, share the view of TQM that an organization's primary purpose is to stay in business, so that it can promote the stability of the community, generate products and services that are useful to customers, and provide a setting for the satisfaction and growth of organization members. So now for the individual assignment of TQM in MBA program at BBU is requires spreading out one topic “Explain how Deming and Crosby theories contribute to the understanding of Total Quality Management? Explain the strength and weaknesses of their contributions expressing some practical examples”

The purpose of this assignment is for learner to be familiar with the importance of Total Quality Management (TQM) as a critical strategy in contributing to the organizational effectiveness and efficiency and ultimately to its competitiveness.

The methods to tackle the main issues asked are: (i). try to understand well what the topic means, its terms and must be clearly in structuring of assignment. (ii). Need to read academic literature, the lecture notes, and supplementary reading from others references book/documents. (iii). Do further research within Internet and library, (iv). Do thorough review the literature of the topic and (v). Make good discussion and properly conclusion.
II. The contribution of Deming's theory to understand TQM

A. Strengths of Deming's theory

The strengths of Deming's theory are (1) Deming's 14 points plan for TQM, (2) Deming's cycle (PDCA), (3) Intrinsic-extrinsic motivation and leadership are recognized as important, (4) Application of statistic theory, (5) Provide a systematic and functional logic, (6) Expectation of management to change, means management comes before technology.

A.1. Deming's 14 points plan for TQM

Point 1: Create constancy of purpose toward improvement of the product and service so as to become competitive, stay in business and provide jobs.

Point 2: Adopt the new philosophy. We are in a new economic age. We no longer need live with commonly accepted levels of delay, mistake, defective material and defective workmanship.

Point 3: Cease dependence on mass inspection; require, instead, statistical evidence that quality is built in.

Point 4: Improve the quality of incoming materials. End the practice of awarding business on the basis of a price alone. Instead, depend on meaningful measures of quality, along with price.

Point 5: Find the problems; constantly improve the system of production and service. There should be continual reduction of waste and continual improvement of quality in every activity so as to yield a continual rise in productivity and a decrease in costs.

Point 6: Institute modern methods of training and education for all. Modern methods of on-the-job training use control charts to determine whether a worker has been properly trained and is able to perform the job correctly. Statistical methods must be used to discover when training is complete.

Point 7: Institute modern methods of supervision. The emphasis of production supervisors must be to help people to do a better job. Improvement of quality will automatically improve productivity. Management must prepare to take immediate action on response from supervisors
concerning problems such as inherited defects, lack of maintenance of machines, poor tools or fuzzy operational definitions.

**Point 8:** Fear is a barrier to improvement so drive out fear by encouraging effective two-way communication and other mechanisms that will enable everybody to be part of change, and to belong to it. Fear can often be found at all levels in an organization: fear of change, fear of the fact that it may be necessary to learn a better way of working and fear that their positions might be usurped frequently affect middle and higher management, whilst on the shop-floor, workers can also fear the effects of change on their jobs.

**Point 9:** Break down barriers between departments and staff areas. People in different areas such as research, design, sales, administration and production must work in teams to tackle problems that may be encountered with products or service.

**Point 10:** Eliminate the use of slogans, posters and exhortations for the workforce, demanding zero defects and new levels of productivity without providing methods. Such exhortations only create adversarial relationships.

**Point 11:** Eliminate work standards that prescribe numerical quotas for the workforce and numerical goals for people in management. Substitute aids and helpful leadership.

**Point 12:** Remove the barriers that rob hourly workers, and people in management, of their right to pride of workmanship. This implies, abolition of the annual merit rating (appraisal of performance) and of management by objectives.

**Point 13:** Institute a vigorous program of education, and encourage self-improvement for everyone. What an organization needs is not just good people; it needs people that are improving with education.

**Point 14:** Top management's permanent commitment to ever-improving quality and productivity must be clearly defined and a management structure created that will continuously take action to follow the preceding 13 points.
A.2. Deming's cycle (PDCA)

The graphic above shows Deming’s Plan-Do-Check-Act (PDCA) cycle. At all levels of the organization we:

- **Plan** what we are going to do. In this step we assess where we are, where we need to be, why this is important, and plan how to close the gap. Identify some potential solutions.

- **Do** try out or test the solutions (sometimes at a pilot level).

- **Check** to see if the countermeasures you tried out had the effect you hoped for, and make sure that there are no negative consequences associated with them. Assess if you have accomplished your objective.

- **Act** on what you have learned. If you have accomplished your objective, put controls into place so that the issue never comes back again. If you have not accomplished your objective, go through the cycle again, starting with the Plan step.

Frequently, a particular project will define sub-objectives, run thorough the PDCA cycle one or more times to accomplish the sub-objective, then define the next objective and go through the cycle again. Thus, many projects end up “turning the wheel” many times before completion. In ongoing management activities, we find a similar use of the cycle.

What we are trying to avoid by using the PDCA discipline is the “Ready, Fire, Aim” fallacy where people jump to the solution without identifying the problem and assessing if their proposed
solution fixes it, or even results in another problem. The Act step makes sure we don't have to fix it again in a couple of years.

A.3. Intrinsic-extrinsic motivation and leadership are recognized as important

A better way is for management to combine extrinsic and intrinsic motivation to increase quality and pride in the work. Intrinsic motivation is the enthusiasm and positive stimulation an individual experiences from the sheer joy of an endeavor. Management can release intrinsic motivation by creating a culture that encourages employee involvement in using process improvement tools such as the Deming wheel (SDSA and PDSA) to innovate and improve quality.

Each of these assumptions are directly associated with the interrelationships between people. They all revolve around a key concept, receptivity of the management style by those who are not only managing but those who are being managed. The implementation of management philosophies obviously revolves around employee motivation, and not all employees are either easily motivated or receptive to management styles that differ from those to which they have been accustomed.

What motivates an individual, therefore, is at the center of Total Quality Management philosophy. Motivational theory in itself has a long history of both direct and indirect applicability to many aspects of management in general and to Total Quality Management in particular. Indeed, the importance of teamwork in the organizational atmosphere cannot be underestimated. Before employees can effectively interact as a team, however, they must be able to function independently in an efficient and productive manner.

Such independence revolves around numerous factors, some of which were learned in childhood and some of which can be instilled in the professional environment. An important part of this independence is being able to relate to one’s peers and to turn criticism and resistance, which exists from some peers, into a positive factor in influencing team performance.
Leaders applying the Deming-style management need to be experts at molding independent workers and teams. A high performing team is to some degree the product of the individual player's personalities, personalities that had roots as far back as childhood. Deming’s teachings recognize that an individual's qualities or lack of them could be refined in the professional workplace. Lastly, Deming has influenced my thinking in a variety of ways. What stands out is the wisdom behind the value of teamwork, process improvement, individual versus systemic issues, and the pervasive power of continuous improvement.

A.4. Application of statistic theory

While the common practice of Quality Assurance aims to prevent bad units from being shipped beyond some allowable proportion, statistical process control (SPC) ensures that bad units are not created in the first place. Its philosophy of continuous quality improvement, to a great extent responsible for the success of Japanese manufacturing, is rooted in a paradigm as process-oriented as physics, yet produces a friendly and fulfilling work environment.

The SPC paradigm of W. Edwards Deming was not at all the same as the Quality Control paradigm that has dominated American manufacturing since World War II. Statistical Process Control: The Deming Paradigm and Beyond, Second Edition reveals even more of Deming's philosophy and provides more techniques for use at the managerial level. Explaining that CEOs and service industries need SPC at least as much as production managers, it offers precise methods and guidelines for their use.

Using the practical experience of the authors working both in America and Europe, this book shows how SPC can be implemented in a variety of settings, from health care to manufacturing. It also provides you with the necessary technical background through mathematical and statistical appendices. According to the authors, companies with managers who have adopted the philosophy of statistical process control tend to survive. Those with managers who do not are likely to fail.
A.5. Provide a systematic and functional logic

A leader must understand the system he or she is attempting to manage. Without this understanding the system can not be managed or improved. A system cannot understand itself or manage itself. Optimization of the parts does not optimize the whole. System optimization requires coordination and cooperation of the parts which requires leadership.

Moreover, it always links the functional group, which is defined by the business organization and understandably, adhere to the organizational hierarchical structure of authority relationship. That’s true in Cambodia almost of NGOs, Companies, and Govt. are practiced by this approach that mean have seen organization chart, and is distinguished by a designated leader and subordinate members. So, in my opinion, this is the technique of management system that actually demonstrates in the real work and especially it is useful part of TQM.

A.6. Expectation of management to change

Deming expect management to develop closer relationship with operation by listen to them, request then involve to make decision, understand their difficulty and recognize them , adopt to statistical method to ensure effectiveness and efficiency of operation and decision making to reduce variability and cost by setting objective of organization to improve productivity, jobs, ensure long-term survival, and improve competitive position and any decision making must base on research or statistics to ensure decision without any errors.

B. Weaknesses of Deming's Theory

The weaknesses of Deming's theory are (1) Problems with Deming Cycle, (2) the 7 deadly diseases and obstacles, and others inconveniences such as the action plan and methodological principles are sometime vague, the approach to leadership and motivation is seen by some as diagnostic, and it does not treat situations which are practical or coercive.
B.1. Problems with Deming Cycle

The Deming Cycle’s application was intended for quality control purposes and proposed continuous improvement in quality of products/experiments. The simple cycle works well in this application, but it is debatable that it should be applied to major organizational improvement. ISO recognized the need to provide better guidance in this regard and published the ISO standard ISO 9004:2000, which replaced the use of the term continuous improvement with continual improvement. The change is not trivial, it recognizes that organizational quality system performance improvement requires significant effort and needs pauses to consolidate change (hence continual and not continuous improvement) (ISO 9004:2000).

The Deming Cycle has an inherent circular paradigm; it assumes that everything starts with Planning. Plan has a limited range of meaning. Shewart intended that experiments and quality control should be planned to deliver results in accordance with the specifications (see meaning above), which is good advice. However, Planning was not intended to cover aspects such as creativity, innovation, invention or Complex Adaptive Systems. In these aspects particularly when based upon imagination, it is often impossible or counterproductive to plan. Hence, PDCA is inapplicable in these situations.

The Deming Cycle approaches often do not get to the root cause of a problem, especially in adaptive situations which call for an experiential approach but demand much more rigour in analysis and data collection. An adaptive challenge exists where there are no visible solutions to problems, and can exist, for example in areas where chaos, uncertainty, and ambiguity exists, such as new frontiers, and existing complex systems such as Healthcare.

The 'Act' in the Deming Cycle is meant to be interpreted to have a different meaning to 'Do', otherwise it could be as easily have been PDCD or PACA. In PDCA, 'Act' is meant to apply actions to the outcome for necessary improvement (see meaning above), in other words 'Act' means 'Improve' (applying PDCA to itself could result in PDCI).
The Deming Cycle is a set of activities (Plan, Do, Check, Act) designed to drive continuous improvement. Initially implemented in manufacturing, it has broad applicability in business. First developed by Walter Shewhart, it is more commonly called the Deming cycle in Japan where it was popularized by Edwards Deming.

B.2. The 7 deadly Diseases and Obstacles

1. Lack of constancy of purpose. 2. Emphasis on short term profits or performance, quarterly dividends etc. 3. Evaluation by performance reviews, merit ratings builds fear and destroys teamwork. 4. Management mobility. 5. Running the company on visible figures alone all distract from the purpose of the organization, i.e., they all prevent optimization of the system.

Obstacles: Neglect long term planning, relying on technology to solve problems and seeking examples to follow rather than developing solutions all prevent optimization of the system.

Annual reviews and ranking employees indicates the absence of knowledge of variation and an absence of an understanding of the system. A manager who understands variation would not rank people because he or she would understand that ranking people merely ranks the effect of the system on the people. This causes tampering & destroys motivation and teamwork.

Relates to the obstacle: Seeking examples to follow rather than developing solutions. Theory leads to questions which lead to answers which leads to knowledge and subsequent improvement, i.e., the Deming-Shewhart plan-do-check or study-action (PDCA) cycle.

A lack of knowledge of psychology causes, or supports 3. Evaluations with annual reviews merit ratings and ranking people and 5. Running the company based on visible figures alone - results. People need a method to improve, not objectives, quotas & rankings.

III. The contribution of Crosby's theory to understand TQM

A. Strengths of Crosby's theory

A.1. The Clearly Method

Dr. Crosby's theory is attracted by the managers and all organizations or business organization in the world. All most methods of Crosby's theories applied for the work always get succeed because it is easy to follow. Moreover, in 1970s Crosby did a considerable amount of work on
TQM. He is best known for his work on the cost of quality. Crosby’s views were that many organizations do not know how much they spend on quality. For example, the implementation and the success can be seen clearly at Honda, Toyota, and Mazda or other industrial company in Japanese which is TQM approach.

A.2. Four absolutes of quality

The Four Absolutes of Quality Management

1. Quality is conformance to requirements
2. Quality prevention is preferable to quality inspection
3. Zero defects is the quality performance standard
4. Quality is measured in monetary terms – the price of non-conformance

(1) Definition: quality is conformity to requirement, not goodness

Quality improvement is based on a company's ability to get everyone to do their work right the first time. Once the requirements are set up, they must be communicated to all employees, who will then be held accountable for following them to the letter. When management undertakes an obligation to allow no deviations from requirements, the major hassles involved in advancing quality as an integral part of the corporation will be removed.

(2) System: prevention, not appraisal

A quality-oriented company will study its processes and identify opportunities for error before they actually occur. The opposite is appraisal, done after the fact and following the detection of problems than may presumably be solved. Prevention is a commonsense approach that eliminates errors and, in effect, vaccinates the company to insure that mistakes will not occur or reoccur.

(3) Performance standard: zero defects

By scrupulously monitoring each detail and carefully avoiding all errors, the goal of Zero Defects can be reached. This fail-safe system could be put in place once employees realize that no mistakes will be condoned, that every job will be considered important and that quality work will be given recognition. Furthermore, most causes of trouble will be rooted out, as long as everyone in the organization strives to be proactive, rather than reactive.
(4) Measurement: the price of non-conformity to requirements, not quality indices

The price of nonconformance puts a dollar value on the wasted effort stemming from an absence of quality. When a process does not function well on a consistent basis, there are likely to be substantial costs—usually between 20 and 35 percent of revenues—for such items as reprocessing, excess inventories and handling customer complaints. Indexes and charts are not useful in this situation, since they fail to inspire any movement to determine the true cost of quality.

With an understanding of the four absolutes, it becomes clear that quality management is the real thing. If quality were to be compared to operating a car, quality control is the instrumentation panel on the dashboard and quality assurance is the owner’s manual. So, Quality Management is the philosophy the driver uses to correctly and safely manage the vehicle. Therefore, the purpose is to create a reliable organization. That is one where all transactions are completed correctly and all relationships are successful. We don’t want satisfied customers, we want successful ones.

A.3. Crosby’s 14 Steps to Quality Improvement

1. Management is committed to quality – and this is clear to all
2. Create quality improvement teams – with (senior) representatives from all departments.
3. Measure processes to determine current and potential quality issues.
4. Calculate the cost of (poor) quality
5. Raise quality awareness of all employees
6. Take action to correct quality issues
7. Monitor progress of quality improvement – establish a zero defects committee.
8. Train supervisors in quality improvement
9. Hold “zero defects” days
10. Encourage employees to create their own quality improvement goals
11. Encourage employee communication with management about obstacles to quality
12. Recognise participants’ effort
13. Create quality councils
A.4. Step quality methodology

Philip Crosby is an American who promoted the phrases “zero defects” and “right first time”. “Zero defects” doesn’t mean mistakes never happen, rather that there is no allowable number of errors built into a product or process and that you get it right first time. Philip Crosby believes management should take prime responsibility for quality, and workers only follow their managers’ example. He defined the Four Absolutes of Quality Management.

A.5. Worker participation is recognized as important

Emphasizes worker participation (not just management), worker recognition. Currently, a Japanese management approach, commonly refer to as lean production and here called the Japanese Model, represents an alternative model of labor relations. The Japanese model differ from the traditional Fordist model in that it uses workforce participation schemes, production is centered on work teams, and workers input into production improvement and quality control is emphasized. Moreover, workers are being asked to accept a slow down in wage growth, flexibility in work rules, and team-organized production in exchange for greater job security and increased union and worker participation in strategic business decisions.

A.6. Strong on explaining the realities of quality and motivating people to start the quality process

Every manager talks about quality, yet relatively few executives know how to install it at their companies. That's because there are many different approaches to quality, but only a single proven way to make a success of it: imbuing the organization with the philosophy of quality management from top to bottom. A good quality assurance process is simplicity itself. Devolve the decision-making to the people who do the work and let them get on with it!

B. Weaknesses of Crosby's Theory

B.1. Seen as implying that workers are to blame for quality problem

The problem with unions is not all that dissimilar to that posed by entrenched management: Once they win comfortable contracts, they often become impediments to the kind of innovation and flexibility essential to success in today’s economy. So in the name of “job security,” they
undermine a company’s -- or a nation’s -- competitiveness. The result, over time, is less job security for everyone, especially the union workforce. There’s no better example of this than GM, where the UAW now represents about 74,000 hourly workers, compared to 246,000 in 1994. This is classic textbook economics, paraphrased from Gwartney and Stroup: For a time, unionized workers enjoy higher wages and job security. In the long run, however, investment will move away from firms with low profitability (Ford and GM). To the extent that the profits of unionized firms are lower (GM, Ford), investment expenditures will flow into the nonunion sector (Toyota, Honda, Nissan) and away from unionized firms. As a result, the growth of productivity and employment, as well as market share, will tend to lag in the unionized sector. The larger the wage premium of unionized firms and the greater the guarantees of job stability, the greater the incentive to shift production toward nonunion operations. Empirical evidence shows that industries and companies with the largest union wage premiums and greatest guarantees of job stability are precisely the industries and companies with the largest declines in the employment of unionized workers.

**B.2. Emphasizing slogans and platitudes rather than recognizing genuine is difficulty.**

In this point is focused in some real activities in the society which is happened everyday. Saying is easy to talk but doing is so difficult, in factually, the theory is good in the planning and it is also need good willing practicality which access the goal, so that we need both to be avoided slogans and platitudes rather than recognizing genuine difficulty in real situation.

**B.3. Zero-Defects (Z-D) sometimes seen as risk avoidance**

The transformation of organizational management has also proceeded not as a fully changed model having leaped instantaneously, but as a model repeatedly and incrementally modified by the reflection of public policy processes. One of such models is other approach underlying the concept of TQM approach brought about by the paradigm shift during the 1990s. In this context, we will consider TQM approach, as a typical example of multi-dimensional ways of governing. The schemes is based on the co-governance as a multi-level governance by the collaboration, cooperation and mutual interpenetration of the trilogy of the three sectors; the public sector, the private business sector, and the civic nonprofit sector. The trilogy model of the
three sectors, each of which must be an equal subject and actor of governance in principle, will lead to the setting which would make schemes work more usefully and effectively, expand quality public services, and seize the opportunity to meet needs of citizens as customers and stakeholders.

**B.4. Insufficient stress given to statistical methods**

TQM is a participative management style that stresses total staff commitment to "customer satisfaction". TQM is the part management organized for the use of creating and implementing a continuous improvement process that constantly improves on the organization's effectiveness and also their efficiency. The main responsibility of quality lies not on the workers but on the management on all levels. Statisticians, such as Walter A Stewhart, Joseph M Juran, Philip B Crosby and most importantly Dr William E Deming (1900-1993) (3) were responsible for initiating the TQM and share a common role in participatory management and employee improvement. Actually, lack of ability or quality of work is really concerned about the stress in statistical methods which is showed the poor environment context in organization and company.

**IV. Conclusion**

As the result of this assignment research indicates both of philosophers' theories, Dr. Deming and Dr. Crosby, has contributed to the understanding of the Total Quality Management (TQM). This makes learner to be more familiar with the important of TQM as a critical strategy in contributing to the organizational effectiveness and efficiency and ultimately to its compositeness. However in the work environment, it will be not easy or smoothly to apply the concept of TQM, Deming's and Crosby's theories into organization or company unless the top manager requires and he/she commits to achieve. For instant, the public sector in Cambodia, management is not by objective (not MBO). And also for the private sector, the company always thinks about the profit priority before build capacity of staff. Moreover, TQM training to manager is poor opportunity, or lack of budget plan in this categories, so that some staffs use own budget to upgrade their knowledge for work. Beyond this, if the company or organization agrees to apply TQM for their system, it will get more successful in their goal.