

Collaborative Techniques in Customer's Involvement

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INTRODUCTION

An organization that intends to be capable of delivering quality products and services to its customers and must have all its functional departments and areas involved, not only the area of operations. In other words, it is not enough that an item is produced in accordance with its specifications if the project does not meet the necessities of the customers. Moreover, it is not enough that all the departments optimize their performances in an isolated way, aiming at serving its immediate customers. Therefore, it is necessary to integrate the diverse actions in the most varied areas of the company so that they will lead it to a lasting competitiveness.

This lack of integration has been pointed out by many authors in papers about the implantation of programs of total quality management (TQM) in occidental countries, including Brazil, which emphasize some points that can explain a great part of the decline of the TQM program. The problems of implementation, the sprouting of reengineering as a "shortcut" for the results, and the extreme focus in standardization and in certification required by the ISO 9000 norms are among the possible causes mentioned. Questions related to the focus in the strategic positioning are also included. However, this decline does not mean that concepts related to TQM became obsolete.

Thus, considering Cordeiro's (2004) approach, which stresses that the "management of quality is total," two principles in the process of implementation of TQM programs are pointed out: first, there must not be a customer-employee gap; the target customer of the company must be fully satisfied; second, all the departments and employees of the company must work in an integrated way in order to fulfill these gaps throughout time. This article revisits the TQM concept,

raising the reasons that led this program to lose part of its efficacy in improving the company's performance and presents the collaborative work techniques in use through the study of a case supported by computer supported collaborative work (CSCW) in the process of certification of ceramic blocks (bricks). The use of the CSCW allowed the integration of the red ceramic industry with its final customer, the civil construction company.

TOTAL QUALITY MANAGEMENT

The term *quality* was defined by diverse authors under distinct points of view, characterized by history, culture, and economic and social development, having its evolution divided in different eras of quality: the inspection era, statistical control of quality era, guarantee the quality era; and total quality management era (Garvin, 1992).

Definitions given by Juran (1992), Deming (1982), and Crosby (1992) that emphasize quality management are considered hereafter. Juran elucidates the concept of total quality management through the expression "adequacy to the use," which means that quality is nothing but meeting consumer expectations (internal customers as well as external ones) through the adequacy of the internal processes of the organization. Deming defines total quality management as a continuous improvement of products and processes, aiming at the customers' satisfaction. On the other hand, Crosby defines quality as "the conformity with the project requirements." After some time, the definition has been modified for "conformity with customers' requirements," evolving, later on, for the concept of total quality management.

Such definitions are similar in the aspect of involving the customers in the process through meeting their

necessities, in which TQM is the approach or philosophy of the improvement for both customer satisfaction and the way the organizations work, extending the concept of total quality control to total quality management. With the advent of economy globalization in, for example, the Mercosul European Common Market, among others, this philosophy of customers' satisfaction has become a basic requirement among the organizations instead of being a simple competitive differential. Therefore, for a company to join in, it was mandatory to get a certificate that guarantees the quality of the productive processes; that is, the productive process was certified by the norms of the International Organization for Standardization (ISO). Thus, in 1987, ISO published a series of norms, the ISO 9000, intending to create a standard for the application of the contents of quality management in European companies and, later on, in the whole world. However, according to Cordeiro (2004), many papers on the implantation of the TQM program in the occidental countries, including Brazil, point out certain points that can explain a great part of the decline of the TQM.

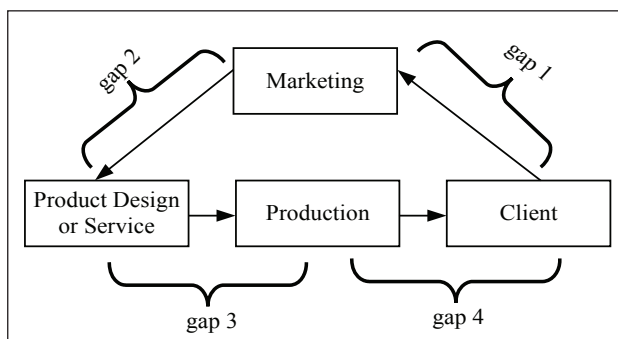
The implementation problems, the extreme focus on standardization and certification considered for ISO 9000 norms, and the questions related to the focus in the strategic positioning are among the possible causes. However, its decline does not mean that the concepts about TQM became obsolete. Most of these difficulties were due to the fact that some people lacked understanding of the essence of the TQM program, as well as to recklessness in the essential aspects, such as little involvement of the operational employees and lack of

commitment of the high manager with the cultural issues, and so on. Seeing that Cordeiro (2004) represents this problem through the model presented in Figure 1 adapted from Slack, Chambers, and Johnston (2002) which defines the concept of quality as the non-existence of gaps among the production process, the marketing and the customer and describes the model that helps in the understanding of the meaning of the word "quality" in the strategic quality management era:

Gap 1 means that the function "marketing" must correctly identify the necessities, desires and expectations of its target customer. If it does not occur, the product or service cannot be considered a quality one, even if the other gaps are filled. Gap 2, in turn, presents a possible difference between the specifications created for the product/service project function and the necessities, desires and expectations identified by the marketing function. In case this gap is not filled, the product or service cannot be considered a quality one, even if there are no more gaps. There is still one last possibility for the consumer's non-satisfaction. If the marketing function communication about the characteristics of the product or service creates expectations that cannot be met, even with the fulfilling of gaps 1, 2 and 3, gap 4 would be opened, represented by the difference between the expectation created by the speech to promote a product and the real delivered service to the customer. One may notice that this gap can exist, even though all the others are filled.

Therefore, following Cordeiro's (2004) approach, the TQM programs have not been valued in the occidental companies, but, on the other hand, the concept of fulfilling gaps, according to its definition, seems really updated. Quality, in conformity with the project, is seen as a prerequisite for the competitive success of the companies; thus, it is pursued by means of TQM programs and certifications in ISO 9001/2000 norms. In order to make sure that the specifications of the customer are correctly interpreted in proper project specifications, this work presents a proposal of alternative strategy to reduce the gaps in quality presented in Figure 1, using the computer supported collaborative work tool to improve the essential abilities related to empowerment and the team work in the process of implementation of TQM programs.

Figure 1. Quality defined as the non-existence of gaps (adapted by Cordeiro, 2004, from Slack, Chambers, & Johnston, 2002)



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