# THE INTEGRATION OF HUMAN

# RESOURCES INTO

# TOTAL QUALITY MANAGEMENT

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*The 1990s have seen the sudden emergence of information technology as a powerful domestic and international means of communication between competitive forces on a global scale. As a result of this, the implementation of Total Quality Management (TQM) has become a reality within many industries, both in the manufacturing and service sectors. However, in order for the philosophies of TQM to be effectively integrated, all constituents within an industry must be actively involved. This paper provides an overview of a plan that would contribute to the effective involvement of Human Resource Management (HRM) in the TQM plan for an existing organization. The plan involves reorganizing HRM as a "customer care unit," which will undertake responsibilities associated with the standardization and monitoring of TQM within the corporation.*

I ncreased global competition and the success of many foreign industries in what were traditionally considered local markets has led to many organizations restructuring the way they conduct business, with a greatly increased awareness regarding their commitment to quality. This change in corporate culture necessitates a greater emphasis on the interaction between the provider and the supplier of a service or product. The involvement of HRM is critical in (i) monitoring the performance of

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a firm in providing quality, and (ii) assisting in the development of a process which will enhance employee skills so that the firm may maintain and improve its ongoing relationship with clients.

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In defining TQM, one needs to consider various dimensions of quality (Fisher, 1990). In addition to factors involved with the actual physical attributes of a product, it is essential to consider the firm's effectiveness in meeting the needs and expectations of its clients. Effective TQM necessitates organizational focus on meeting and exceeding customer expectations by developing a new management approach and corporate culture (Berry, 1991). This paper builds on the results of Wilkinson, Marchington and Dale (1993) by proposing a plan to assist this transition through the integration of HRM, and suggests guidelines which may help HRM contribute to the firm's goal of achieving TQM. We begin by reviewing the current state of the literature about the interaction of HRM and TQM in section II. We then proceed in section III to discuss survey results which suggest that the reorganization of the HRM department could increase one of the benefits of the organization's commitment to quality, namely, consumer satisfaction. We then proceed to overview a proposed role for Human Resource Management in the TQM plan in section IV. These results are further extrapolated upon in section V, where we discuss a scenario in which HRM assists in the development of a "Customer Care Unit." Section VI is by way of conclusion.

## II. LITERATURE REVIEW

The concept and importance of TQM as being central to the successful competitive viability of a firm is not new. However, current literature has seen an explosion of publications in the area of TQM as viewed from the operations/production domain; for example, Dale and Plunkett (1990). A substantial gap in the treatment of social factors related to TQM exists, as noted by Hill (1991), despite the fact that Crosby (1979) and Ishikawa (1990) note that the ultimate success or failure of TQM depends partially upon the interaction and involvement of the organization's primary human resource, namely, people. Consequently, much of the existing literature continues to focus on the "hard" side of TQM. In retrospect, we recognize that this reflects the production orientation of most individuals involved in total quality management, where the prevailing background lies in areas such as statistical quality control, layout and design, and just-in-time inventory control.

More recently, the "soft" side of TQM has begun to emerge in the literature focusing on creating an organizational culture which stresses client awareness within the organization. The necessity of achieving a change in organizational culture in order to achieve TQM is discussed in Glover (1992). Although this treatment is still in the developmental stage for many US firms, Ishikawa (1985) notes that for some time the Japanese have recognized that the employee is ultimately responsible for quality. Taguchi (1986) touches upon the importance of communication between employee and management in achieving TQM, but the significant importance of employee participation in the decision making process is advocated to a greater extent by Deming (1986) and Feigenbaum (1983). The importance of "total employee involvement" within all levels of the organization is also cited by Oakland (1989) and Ross (1993). The interaction between the human resource dimension and total quality management is supported further by Dale and Cooper (1992), who note that many of the underlying principles of TQM are those emanating from this "soft" side, i.e., the human-oriented side. Furthermore, the failure of

some organizations to successfully implement TQM is related to factors such as resistance to change, management style and organizational culture, again part of the human element present in an organization, as discussed in Kearney (1992) and Miller (1992). .

When considering many of these social and "soft" side issues, the involvement of the Human Resources function may come into play. The fact that TQM and HRM can have mutually beneficial benefits is discussed in Wilkinson, Allen and Snape (1991). There have been attempts to assess the human resource function's contribution to business in general (Legge [1978], Tyson [1987]), but few efforts have focused on the contribution that HRM can make to the organization's TQM commitment, let alone a methodology for integrating HRM into the TQM plan. A few notable efforts may be cited. Samson, Sohal and Ramsay (1993) conclude that the implementation of TQM cannot be effective without consideration of a number of human resource issues such as training, cooperation and involvement, and overall work culture. Their results are based on case study experiences in Australia. Walker (1992) discusses the changes in management philosophy and organizational culture (whose acceptance and implementation are directly related to the HR function) which enabled Rank Xerox to regain lost market share from Japanese competition. Wilkinson, Marchington & Dale (1993) undertook studies in 15 UK organizations. Their findings were that the human resource function can make significant contributions to total quality management in many areas. Some of these included public strategy intervention and behind-the-scenes facilitation at a task level, where contributions were found to be made at both strategic and operational levels. This paper builds on the empirical findings of Wilkinson et. al. by proposing a way for human resource management to effectively enhance the organization's commitment to total quality management. This is done by decentralizing the total quality effort among various groups, one of which we propose to be a "Customer Care" unit. After presenting some statistical evidence supporting the importance of HRM in achieving TQM, we outline a basic model in which the human resource team can be reorganized in increasing the benefits associated with TQM.

## III. THE NEED FOR HUMAN RESOURCE MANAGEMENT

We begin by discussing survey results designed to determine the impact that HRM can have on some aspect of TQM benefits. This benefit was measured by a consumer satisfaction response variable. Our survey consisted of 144 respondents from various organizations. These respondents were asked to consider the following three issues:

1) Their firm's client's overall level of satisfaction,
2) Their firm's overall level of employee satisfaction, and
3) The firm's overall commitment to quality management.

Responses were to be scaled between one and ten. A score of ten indicated the highest level of satisfaction/commitment, while a score of one indicated the lowest. A response of five indicated an average level of satisfaction/commitment. Respondents were also grouped (blocked) according to their firm's size. Three groups were considered:

| Block: | # Employees | Sample Size |
|--------|-------------|-------------|
| 1 | 1-200 | 29 |
| 2 | 201-2000 | 43 |
| 3 | >2000 | 72 |

The first result we considered involved the mean response level for each of the three issues itemized above. We initially considered the sample as a whole. The grand mean responses for issues one, two and three were 6.2, 4.7, and 6.0, respectively. In light of the recent emphasis on quality management, we were somewhat surprised at the low mean response of 6.2 for client satisfaction. However, since responses were only employee's perceptions of client satisfaction, heed was paid to the magnitude of the results, as we would expect each employee's frame of reference to be different. Perhaps equally surprising was the overall result for employee satisfaction (grand mean = 4.7). Further evaluation indicated that none of these results differ significantly from 5.0 ($\alpha$ = .10). Following this

analysis, we then considered blocking the data. The results are summarized below in Table 1:

Table 1: Mean Response (Standard Deviation)

| Block | Size | 1 Client Satisfaction | 2 Employee Satisfaction | 3 TQM Commitment |
|-------|------|------|------|------|
| | | | Issue: | |
| 1 | 1-200 | 6.27 (1.82) | 5.37 (2.16) | 5.03 (2.08) |
| 2 | 201-2000 | 6.14 (1.26) | 4.67 (1.87) | 6.21 (1.93) |
| 3 | >2000 | 6.17 (1.74) | 4.53 (2.00) | 6.25 (2.19) |

From the data, we note that larger firms appeared to place a heavier emphasis on TQM than smaller firms, while smaller firms achieved higher levels of employee satisfaction. These conclusions were supported by standard statistical tests of hypothesis ($p < .01$). Neither of these results would contradict expectations. We further note that this disaggregation of the data by block/group as shown in Table 1 showed no effect upon client satisfaction, where differences in the three response levels to issue 1 were insignificant ($p > .10$).

Our next concern was to determine whether one of the response variables, client satisfaction, was positively correlated to either of the two remaining factors of interest: employee satisfaction and emphasis on quality management. Though results from Table 1 were insufficient to warrant a conclusion, the determination of the sample correlation coefficient (utilized on the sample as a whole for each factor independently) indicated a positive association between both factors (employee relations [$\rho=.52$] and emphasis on TQM [$\rho=.40$]) and client satisfaction, which was to be expected. The results were deemed significantly different from zero, with respective t values of 7.25 and 5.14. Consequently, we were able to conclude that there is a positive effect on

client satisfaction through increased emphasis on both employee relations and total quality management.

In light of the low level of employee satisfaction found in the larger firms (group 3), we suggest that increased emphasis on employee relations could increase client satisfaction in these firms from its current value of 6.17. Since (i) one of the primary roles of the HRM team is to assist in improving both employee relations and employee satisfaction, and (ii) employee relations are positively correlated with client satisfaction, it follows that (iii) the HRM team can make a contribution to client satisfaction, which is a primary goal of the commitment to Total Quality Management.

To understand more specifically the effect of each factor (employee satisfaction and emphasis on quality management) on the dependent variable (client satisfaction), a regression analysis and corresponding ANOVA were evaluated. Both factors were found to be highly significant ($p < .001$) and accounted for approximately 31% of the variation in consumer satisfaction responses. Inclusion of factors accounting for blocks were insignificant. Note that $r^2$ is low, due in part to the fact that there exist many other factors which could account for a significant percentage of the variation which were not considered (such as actual product quality). Further, the resulting regression coefficients (.35 and .17, respectively) indicate that the sensitivity of the responses regarding client satisfaction were greater to changes in employee satisfaction than to the emphasis on quality management ($p < .05$). Consequently, it appears that client satisfaction is not only positively correlated with employee relations, but also perhaps more significantly than with the firm's emphasis on quality management. Therefore, efforts to improve employee relations, which are tied directly to HRM, could offer significant improvements in client satisfaction. These results suggest that finding a way to integrate HRM in the TQM plan may significantly improve the level of client satisfaction for an organization's clients.

We note that this evaluation was but a starting point in what could lead to a much more in-depth analysis. Our main concern was to establish that there exists a role for HRM with regard to the benefits of TQM implementation through improving employee relations, and support the view that the human resource dimension plays a significant role in the implementation of TQM.

**"The importance of HRM in creating a tempered environment which will facilitate the incorporation of TQM has been recognized by top-level management within some organizational settings."**

A word of caution is to be made: As with many other statistical evaluations, the results must be evaluated in light of the fact that responses were based on employees perceptions, which (i) do not necessarily represent an objective view of the response variable, and (ii) are relative due to each employee's frame of reference and personal biases. Personal biases could also play a role in each respondent's responses. Corrections for these factors were not considered.

## IV. THE ROLE OF HUMAN RESOURCE MANAGEMENT IN TOTAL QUALITY MANAGEMENT

The importance of HRM in creating a tempered environment which will facilitate the incorporation of TQM has been recognized by top-level management within some organizational settings. How well HRM performs this role within these organizations hinges on (i) their

understanding of the underpinnings associated with TQM (Rosett & Krumdieck, 1992) and (ii) their ability to coordinate the organization's human resource activities towards providing quality service to its clients. Essential to this coordination is the full commitment of senior management, whose responsibility is to ensure that the process is continually implemented and monitored while simultaneously creating a spirit of internal harmony for all those involved (Wilkinson & Witcher, 1991). We suggest that the role of HRM in this coordination should include, but not be limited to, the following external (consumer based) and internal (employee based) functions:

- Initiating programs which develop and facilitate communication regarding quality within all levels of the organization, including statistical analysis of data. Inherent in this task is HRM's responsibility to generate interest among the workforce towards the active participation in these studies.
- Monitoring both customer and interdepartmental relationships.
- Assisting in training employees in communication sciences.
- Establishing and disseminating a vision which will assist in the cultural change mandated by the implementation of a TQM philosophy.

In addition to the above, we suggest that HRM must also transform some of the more traditional views of what "value" in a good or service represents, instilling the proper imagery within the conceptual framework of each employee. To truly understand how "value" may be measured, one must consider a philosophy in which the final process in the provision of a good or service is the performance of the product when it is placed in the consumer's hands (Aguayo, 1991). For purposes of clarity, we briefly discuss two instances where the traditional interpretation of value may need refining:

Instance 1: **Quality cannot be evaluated by preference**. Although stainless steel may be universally preferred to sterling silver, it does not imply that stainless steel has higher quality than sterling silver. The

dominance of steel over silver within homes is primarily due to consumer preferences, which are predicated on consumer needs (together with price, which also playing a significant role). The quality of either product should be gauged relative to the consumer's expectations for that product alone, measured in such terms as performance, durability, aesthetics and customer service. Management must be aware of the unique set of expectations each product or service generates, and craft its service or manufacturing process so as to meet or exceed those expectations.

Instance 2: **The confusion of quality with new technology features**. It is common to assume that a product containing a unique feature will represent higher quality than a product with none. For example, consider the Pentium microchip. Although advertised as being able to break the barriers of conventional PCs with regard to micro computing speed, the success of the Pentium chip rests not primarily on its ability to achieve what is advertised, but on the ability to meet consumer expectations. These expectations will include many facets other than computing speed, such as reliability, accessibility, service, and cost. The mere fact that the chip features new technology elements does not imply that the chip will be a "quality" product.

The importance of the organization's employees in the successful implementation of TQM cannot be understated. Parker (1991) goes so far as to state: "Employees are the most important company asset—it's just that clear to me." However, successful implementation of TQM can occur only when management has a clear view of what is to be accomplished, and can effectively involve their most valued asset—human resources, in the process. TQM is possible only if employees are ready to share the vision that all organizations are in the business of customer service. HRM can assist in this regard by providing guidelines throughout all levels, disseminating the proper vision of TQM. Put another way, HRM can prompt employees to take on a leadership role, and instill within the employees the spirit that:

(i)    leadership is not only found at the top of an organization's management chain, but at all levels, and

(ii)    that each and every employee is a leader in his/her own right.

Leaders should have the courage to make decisions and utilize their transformational power to make a total commitment to TQM without the fear of failure. The distribution of the "leadership" role within an organization, through the assistance of HRM, allows a firm to implement TQM more on a strategic level, as opposed to a departmental level, which helps to insure a consistent vision of what TQM represents throughout the organization.

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## V. HUMAN RESOURCE MANAGEMENT AS A CUSTOMER CARE UNIT

We propose that HRM delegate the total quality management effort to various groups while sharing the role of a "Customer Care" group. While the customer service department responds directly to the consumer, the Customer Care group:

(i)    helps to standardize and monitor TQM,

(ii)    investigates ways to improve responses to the consumer (Colby, 1992), and

(iii)    supports the corporate-wide TQM image.

HRM should simultaneously work to remove internal organizational biases mandating a departmental "us-against-them" attitude in favor of a cooperative effort between departments, processes and employees at all levels. If HRM can transform the current environment into a culture which emphasizes the success of the organization as a single entity, as opposed to the naturally attractive alternative which stresses individual success, then TQM can be successfully implemented. Hammons and Maddux (1992) suggest that HRM can be the overseeing link in this transformational process where total quality is not only built into the product or service, but incorporated into the design of the product, service and system.

**"The Customer Care group, which would include members from procurement, operations, suppliers and consumers, as well as HRM, would provide feedback, identify potential problems and plan future improvement."**

As suggested, the implementation and responsibility of monitoring quality, and receiving and distributing feedback, may be delegated to different groups within the firm. For example, a "Quality Improvement" team containing representatives from all organizational levels may be assigned the specific function of monitoring TQM. The HRM team may be responsible for employee orientation and the creation of a culture which instills the visions and doctrines held by TQM. The Customer Care group, which would include members from procurement, operations, suppliers and consumers, as well as HRM, would provide feedback, identify potential problems and plan future improvement. An example of a prototype model illustrating this concept is shown below in Figure 1.

## Figure 1: PROTOTYPE OF CUSTOMER CARE GROUP
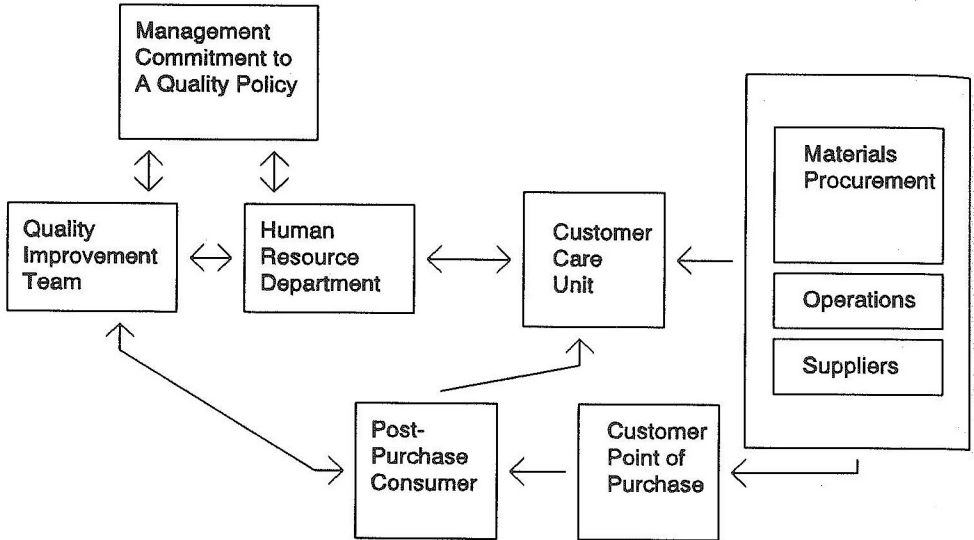


The implementation of the type of model illustrated above would help communicate to employees the reality that top-level management is pursuing an all-out commitment to quality. Lack of this reality serves as a potential barrier to the implementation of TQM within an organization (Augenblick, 1990). Although U.S. response to TQM has been somewhat sluggish in the past, the 90s have brought radical change regarding an organization's commitment to TQM. We are also becoming increasingly aware that the successful implementation of TQM requires the active involvement of everyone, not only top management, something which was recognized in foreign markets as far back as 1947 (Ishikawa, 1985).

In order to accomplish the goals discussed thus far, HRM must develop an action plan through which all the goals of TQM can be met. We present below a sample plan illustrating the steps that HRM can follow in preparation for the implementation of an organization-wide commitment to TQM:

- form structured learning cells through which the benefits of TQM can be understood by all existing employees within HRM,
- conduct on-site visits to other organizations implementing TQM,
- develop a company-wide promotional effort geared towards motivating employees to share in the implementation of TQM,
- define, within the context of the service or product provided, what the dimensions of quality are, and set guidelines regarding how these dimensions may be satisfied,
- develop a monitoring system, such as that shown in Figure 1,
- develop a training process through which all employees at all levels can understand the benefits of TQM, and the role that they may play as leaders within the new TQM environment.

# "Because TQM requires a total organizational commitment, this change can be greatly facilitated through the active involvement of HRM."

It is our belief that HRM can begin to make a significant contribution to the changing corporate image and culture only after these preparatory steps have been accomplished.

## VI. CONCLUSION

Transforming the corporate culture is not easy. Because TQM requires a total organizational commitment, this change can be greatly facilitated through the active involvement of HRM. Human resource professionals have equipped themselves with invaluable human relations skills, and can contribute towards maintaining the delicate balance between concern for

production and concern for employees. The development of an HRM model which includes a "Customer Care" group can provide assistance in:

(i)    providing a vision of TQM,
(ii)   monitoring the progress towards the firm's goals in achieving TQM, and
(iii)  provide feedback at all levels regarding the level of success the firm is having in their pursuit of TQM.

Although U.S. industries still boast of inflated profit levels in the 90s, we now recognize that much of this gain was realized at the expense of the employee due to layoffs and consolidation (Bhargaua, 1992). The net result of these actions has been the continued loss of employee loyalty, without which TQM is helpless. A reversal in trend can come about only through a company-wide commitment to quality. This involves the vision that each and every employee share in the leadership role and responsibility for an accurate representation of the firm's commitment to quality with every action that is undertaken. TQM is a group policy, and the human resource professional can play an active role in this restructured culture by unifying the workforce and instilling a vision of quality, not only throughout all levels of management, but throughout the whole organization. This view of the organization is essential towards building quality into the design of the system. HRM can play a leading role in the transformation of "big business" from a money making conglomerate to a well-tempered service provider concerned with quality and the benefit of all involved, both within the organization and without.

# REFERENCES

Aguayo, R. (1991). *Dr. Deming: The American Who Taught the Japanese About Quality*. New York, NY: Simon and Schuster.

Augenblick, L. (1990, May). "Barriers to Quality." *Personnel Journal,* 69(5), 30-40.

Berry, T. (1991). *Managing the Total Quality Transformation*. New York, NY: McGraw Hill.

Bhargaua, S. (1992, August 17). "At Least Profits are Recovering." *Business Week*, 62-65.

Colby, M. (1992). "The Quality Service Manager: A New Strategic Direction for the '90s." *Bank Marketing,* 24(4), 28-31.

Crosby, P. (1979). *Quality is Free*. New York, NY: McGraw-Hill.

Dale, B. and Cooper, C. (1992). *Total Quality and Human Resources: An Executive Guide*. London, UK: Blackwell Publishers.

Dale, B. and Plunkett, J. (1990). (Eds.). *Managing Quality*. Hertfordshire, UK: Philip Allan.

Deming, W. (1986). *Out of the Crisis*. Cambridge, MA: MIT Centre for Advanced Engineering Study.

Feigenbaum, A. (1983). *Total Quality Control*. New York, NY: McGraw-Hill.

Fisher, G., (1990, September). "The Dimensions of Quality." Presented at the Symposium held at The University of Texas in Arlington.

Glover, J. (1992). "Achieving the Organizational Change Necessary for Successful TQM." Presented at 3rd National Conference of the Total Quality Management Institute, Hobart, Australia, 10-12 May 1992.

Hammons, C. and Maddux, G. (1990, July), "Total Quality Management in the Public Sector." *Management Decision,* 28(4), 15-19.

Hill, S. (1991, December). "Why Quality Circles Failed but Total Quality Might Succeed." *British Journal of Industrial Relations,* 29(1), 541-565.

Ishikawa, K. (1985). *What is Total Quality Control.* Englewood Cliffs, NJ: Prentice Hall.

Ishikawa, K. (1990). *Introduction to Quality Control,* London, UK: Chapman and Hall.

Kearney, A.T. (1992). "Total Quality: Time to Take Off the Rose-Tinted Spectacles." *TQM Magazine.* Bedford, U.K.: IFS Publications.

Legge, K. (1978). *Power, Innovation and Problem Solving in Personnel Management.* New York, NY: McGraw Hill.

Miller, C. (1992). "TQM Value Criticized in New Report." *Marketing News,* 26(3), 1-16.

Oakland, J. (1989). *Total Quality Management.* London, UK: Heinemann.

Parker, B. (1991). "Management Excellence: The 1990's Challenge." *Management Quarterly,* 31(4), 3-7.

Ross, J.E. (1993). *Total Quality Management: Text, Cases and Readings.* Delray Beach, FL: St. Lucie Press.

Samson, D., Sohal, A. & Ramsay, E. (1993). "Human Resource Issues in Manufacturing Improvement Initiatives: Case Study Experiences in Australia." *International Journal of Human Factors in Manufacturing*, 3(2), 135-152.

Taguchi, G. (1986). *Introduction to Quality Engineering*, New York, NY: Asian Productivity Association.

Tyson, S. (1987). "The Management of the Personnel Function." *Journal of Management Studies*, 24(5), 523-532.

Walker, R. (1992). "Rank Xerox - Management Revolution." *Long Range Planning*, 25(1), 9-21.

Wilkinson, A., Allen, P. & Snape, E. (1991). "TQM and the Management of Labour." *Management Decisions*, 30(6), 116-124.

Wilkinson, A., Marchington, M. & Dale, B. (1993). "Enhancing the Contribution of the Human Resource Function to Quality Improvement." *Quality Management Journal*, 1(1), 35-46.

Wilkinson, A. & Witcher, B. (1991). "Fitness For Use? Barriers to Full TQM in the UK." *Management Decisions*, 29(8), 46-51.