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PRACTICES IN THE FORTUNE 1000**

**CEO PUBLICATION
G 92-7 (210)**

**EDWARD E. LAWLER III
SUSAN ALBERS MOHRMAN
GERALD E. LEDFORD**
University of Southern California

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Center for Effective Organizations
School of Business Administration
University of Southern California
Los Angeles, CA 90089-1421
TOTAL QUALITY MANAGEMENT

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There is doubt that total quality management is being adopted by more and more organizations. Little accurate information is available, however, on how frequently it is being adopted and who is adopting it. In order to provide accurate data we surveyed the Fortune 1000 corporations in 1987 and again in 1990¹. The results provide a very interesting picture of how and why American management practices are changing.

Seventy-seven percent of the 313 companies responding to our 1990 survey said that some of their employees are covered by total quality programs. On the average, 41 percent of employees in companies with total quality programs are covered by them. A surprisingly large 17 percent of the companies surveyed reported that they covered 100 percent of their employees with total quality programs of some kind. These companies clearly are trying to make total quality a way of life. Overall, it is obvious that quality programs have been tried by most organizations.

Table 1 shows how frequently companies use groups and team processes for generating suggestions and doing problem solving. The majority of organizations report using some form of parallel suggestion activity. Quality circles are used in 66 percent of all companies. Other types of participation groups are used by 86 percent of all companies. The use of parallel structures is typically limited to much fewer than half the employees in an organization. This necessarily limits their impact, because organizations are sharing only a limited amount of power with a limited number of employees.

A comparison of the 1987 data with the 1990 data shows an increase in the use of problem-solving approaches. The increase in the use of non-quality circle approaches is particularly impressive, both because of the size of the increase (16 percent more companies used them in 1990) and because of the number of components that were already using them.

Union-management quality of work life (QWL) committees have been tried in a much smaller percentage of the companies. This, of course, follows from the relatively low level of

union membership in the United States and in these companies. A comparison between 1987 and 1990 shows a 10 percent increase in the percentage of companies using this approach. Like other parallel participation practices, this one is clearly growing in popularity.

Table 2 shows how frequently seven specific total quality management practices, which might be part of an overall total quality management program, are adopted². The pattern for all but two of these is very similar. Most organizations use direct employee exposure to customers, self-inspection, work simplification, cost of quality monitoring, and collaboration with suppliers on quality efforts. In the typical organization, however, these affect less than 40 percent of employees. This finding fits with the earlier point that most total quality programs do not affect all employees in an organization. One contributor to this situation may will be the fact that many quality programs start in manufacturing areas and at lower levels of organizations, as a result, the biggest impact is on the production floor. In service organizations, a similar pattern often develops.

Two total quality practices--just-in-time deliveries and work cells or manufacturing cells are much less frequently adopted and typically cover a lower percentage of the work force. This finding undoubtedly occurs because these practices are particularly appropriate to manufacturing environments and both require major changes before they can be implemented. In the case of work cells, pieces of equipment must often be moved around, and a number of work flows must be changed. Similarly, just-in-time deliveries require significant adjustments in equipment, work methods, inventory procedures, and a host of other organizational practices.

The results show that quality programs are in use in the vast majority of U.S. organizations and suggest that a fairly standard pattern of practices is typical of total quality programs. However, total quality management is still implemented in a part of most organizations and does not represent a total organizational commitment. This may change in the future, of course, as organizations become more sophisticated in managing total quality programs and as it becomes more apparent how to apply total quality programs to white-collar work and managerial work.

For the moment, however, total quality practices are still used only in parts of the typical organization.

Adoption and Competitive Conditions

Competitive conditions have a bearing on the adoption of total quality. Companies facing foreign competition and shorter product life cycles cover more employees with their total quality programs and use every practice, except direct exposure of customers, with a greater percentage of their employees. Firms with greater foreign competition are actually less likely to have broad employee exposure to customers, reflecting the fact that firms with a greater manufacturing component are more likely to be experiencing intense foreign competition.

Growth or decline of markets is not highly related to the use of total quality practices. Firms in declining markets, are somewhat more likely to involve employees in their quality programs and to use work cells. These firms also tend to have larger manufacturing components. Firms in growing markets tend to have smaller manufacturing components and are more likely to expose their employees to customers and use work simplification.

Finally, we examined patterns of use of total quality practices among firms that have downsized, in comparison with those that have not. Downsizing is significantly associated with greater use of cost-of-quality monitoring and of work cells. Reducing layers of management is associated with both of these, as well as, more collaboration with suppliers in their quality efforts, and more use of just-in-time deliveries. Reduction of layers is associated with fuller use of quality approaches, in comparison to firms that have not reduced layers.

The use of the seven total quality management practices was examined in a variety of industry groups. Firms in chemicals, electronics, and motor vehicles and parts were the manufacturing firms ranked highest in the use of quality practices. Firms in foods and forest products were lower in the use of total quality. Total quality is not used to a substantial extent in any of the service industries. Its highest use, in diversified services, is still relatively low in

comparison to the use level of leading manufacturing firms. Apparently, total quality management is in a very early stage of use in most service organizations.

Employee Involvement and Total Quality Management

There is a great deal of conceptual overlap, but there are also some key differences, between the organizational practices that are part of total quality and those that are part of employee involvement. As noted earlier, total quality management programs often establish quality circles and other participative groups that are clearly a way of creating involvement and sharing power. They utilize problem-solving and process-control tools in order to facilitate their quality improvement activities. The teaching of these tools to employees throughout the organization constitutes a form of knowledge and skill development that expands the capacity of the work force to contribute and to manage their own work processes. Total quality's use of self-inspection and work cells can best be sustained by an explicit move toward self-management. In some settings, this may entail the establishment of self-managing teams.

A key contribution of the total quality movement has been its emphasis on the processes that cut across the organization, beginning with contact with customers and going all the way back to the interface with suppliers. This emphasis has been embodied in such practices as exposing employees directly to customers and collaborating with supplier's quality efforts to ensure high-quality materials and enable just-in-time deliveries. These approaches are fully consistent with employee involvement, particularly when they are carried out by the line work units rather than by special staff groups and managers.

One might also ask whether there are any philosophical incongruities between total quality management and employee involvement. The answer is that there are. For example, implementation of total quality tends to be more top-down in nature than is implementation of employee involvement. The management role that is advocated is more directive than that advocated in employee involvement. In addition, the utilization of problem-solving tools and such

techniques as just-in-time deliveries may introduce a certain rigidity that can be interpreted as reducing employee control and discretion.

We asked in our survey how employee involvement and total quality management are related in companies that have used them both. Figure 1 illustrates these relationships. In more than half the cases (54 percent), employee involvement started first, 19 percent of the companies started both simultaneously. This pattern probably reflects the fact that employee involvement was popularized earlier in the United States. Early employee involvement, often entailing the establishment of quality circles and other participation groups, can set the stage for the systematization of these efforts through a total quality program. Total quality can help focus involvement efforts explicitly on the work of the firm and on measurements of its processes, thus enhancing their relevance to the competitive conditions that organizations face.

How the relationship between the two programs is managed can be a critical organizational choice. Having two approaches with different names may set the stage for competing programs in an organization. Figure 1 shows that the Fortune 1000 are split on the issue, with slightly more than one-third managing employee involvement and total quality as one integrated program, about one-third managing them as separate but coordinated programs, and the other third managing them separately.

We asked how the majority of managers view the relationship between employee involvement and total quality, and which effort tends to predominate. In three-quarters of the companies, the majority of managers see employee involvement as part of quality. This finding provides further evidence for the hypothesis that the focus of total quality is seen as more relevant to today's competitive business conditions. It may also be an easier concept to rally managers around, since on the surface it emphasizes work processes rather than issues of power and management style. Employee involvement, however, may be viewed as creating the organizational context needed to support quality-improvement processes.

Impact of Performance

The impact of total quality management on organizational performance was not directly investigated. We did, however, look at how the combined effects of total quality and employee involvement programs impact organizational performance. We specifically examined both the relationship between how quality and employee involvement are implemented and managed relative to one another and what success they achieve. There is no significant difference in the results between companies that see employee involvement as part of quality and those that see quality as part of employee involvement. Furthermore, different results are not reported by companies that started employee involvement first, second, or simultaneously with quality. These findings substantiate the basic compatibility of the two approaches, either one can provide an equally effective first effort and can pave the way for the other. We do not have data on whether each is equally likely to lead to the other or whether companies that start with total quality programs are more or less likely to adopt employee involvement practices.

What does make a major difference in results is the way the two programs are managed relative to one another. If employee involvement and quality are managed as one integrated program or as two coordinated programs, they are more likely to achieve desired performance results than if they are run as two separate programs. The three performance areas that show the most positive affect are: quality, customer service, and competitiveness.

Running the programs separately reduces the impact on the transition to a high-involvement culture. Companies that run them separately are less likely to achieve a participatory management style, move decisions lower, and achieve broad skill development and information flow. They are also less likely to remove layers of management, which was found earlier to be associated with fuller implementation of both quality and employee involvement. Finally, they report less improvement in their technology implementation capabilities and in organizational processes and procedures.

In short, it appears that having two separate organizational initiatives, quality and employee involvement, strongly reduces their impact. Companies that take this approach do not

attain as complete an implementation of either one and are not as likely to attain their desired outcomes. This is a very important finding, in view of the number of companies that have two different initiatives and two different support staffs vying for attention. It is very possible that such separation precludes recognition within the organization of the fundamental conceptual and action overlap and leaves organizational members confused and/or cynical about the change strategy. In fact, the two initiatives may be implemented incompatibly.

Conclusion

Most corporations clearly are adopting total quality management practices, but the level of commitment in most companies is low. The leading adopters clearly are those companies that feel the greatest need to improve their performance because they face difficult competitive challenges. Our results strongly suggest that the greatest performance improvements occur when employee involvement and total quality are integrated. This suggests that what is needed is not the adoption of a few new practices but a fundamental shift in the way large organizations are managed.

Notes

1. This study was partially funded by A.Q.P. A full report of the results can be found in *Employee Involvement and Total Quality Management* (1992) by Edward E. Lawler III, Susan A. Mohrman and Gerald E. Ledford, Jr. The publisher is Jossey-Bass of San Francisco.
2. These questions were only asked in the 1990 survey.

Table 2
Percentage of Employees Covered by Total Quality Practices

	None 0%	Almost None 1-20%	Some 21-40%	About Half 41-60%	Most 61-80%	Almost All 81-99%	All 100%
Direct Employee exposure to customers	4	32	31	16	4	4	0
Self-inspection	10	25	31	14	7	7	0
Work simplification	13	26	33	12	7	7	0
Cost-of-quality monitoring	18	35	24	11	4	4	3
Collaboration with suppliers in quality efforts	13	37	27	11	3	3	2
Just-in-time deliveries	24	31	22	11	4	4	2
Work cells or manufacturing cells	41	27	19	9	2	2	0

Table 1

**Practices for Generating Employee Suggestions
and Problem Solving**

Percentage of Employees Currently Involved

Innovation/ program		None 0%	Almost None 1-20%	Some 21-40%	About Half 41-60%	Most 61-80%	Almost All 81-99%	All 100%
Quality circles	1987	39	32	18	7	2	0	1
	1990	34	36	19	7	4	1	1
Participation groups other than QCs	1987	30	33	21	9	3	2	1
	1990	14	35	30	11	5	3	3
Union- management QWL committee	1987	70	20	7	2	1	1	0
	1990	60	26	11	2	0	0	1

B:TotalQua.Mgt/WP
revised: 4/13/92