

TQM in Europe: a case study

TQM and the Transcendental Meditation program in a Swedish top management team

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Abstract

Drawing on a case study of a Swedish top management team whose members were practitioners of the Transcendental Meditation[®] (TM[®]) technique, this article argues for developmental maturity as an important causal factor for effective TQM behaviors and success. It suggests that, first, increased maturity permits expression of more effective cognitive, affective, and team TQM behaviors, as indicated by improved team functioning and successful TQM planning, and, second, practice of the TM technique promotes the psychological maturation that allows a greater range of appropriate TQM behaviors. Thus, the inner development provided by the Transcendental Meditation program has practical value for managers engaged in TQM implementation.

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Introduction

Total quality management (TQM) is a management system that aims at fulfilling customer needs in the belief that doing so will promote long-term organizational success. TQM offers a set of mutually reinforcing principles, each of which is supported by specific practices and techniques. The three main principles of TQM have been identified as customer focus, continuous process improvement, and teamwork. Customer focus refers to attempting to design and deliver products and services that fulfill customer needs and expectations. Continual quality improvement (CQI) refers to a commitment to constant re-examination of the organization's technical and administrative processes in search of better methods. Teamwork generally refers to collaboration between managers and non-managers, across functions within the organization, and between customers and suppliers (Dean and Bowen, 1994). These principles, although new in the 1980s, are now taken for granted in many industries (Dean, 1998).

Like many other change efforts, TQM interventions have met both with success and with failure (Tatikonda and Tatikonda, 1996). The failures are generally attributed not to the theory of TQM but to difficulties in implementing its principles (Bushe, 1988; Cao *et al.*, 2000; Caudron, 1993; Eskildson, 1994; Tatikonda and Tatikonda, 1996). These implementation challenges begin with the leadership team (Krumweide *et al.*, 1998).

Effective implementation of the TQM principles requires both technical innovations and transformations in the social system (Hackman and Wagerman, 1995). Widespread use of quantitative and statistical techniques in organizations has led to increased investment in teaching the technical aspects of TQM in recent years (Bushe, 1988; Dean, 1998). Organizationally, TQM emphasizes teamwork, which drives organizations away from the traditional separation of departments, functions, and jobs and towards integration of functions and

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activities (Dean and Snell, 1991). TQM aims to create social systems where fear, defensiveness, hostilities, conflict, and lack of tolerance have been replaced by open communication, creativity, collaboration, trust, and learning (Dale and Bunney, 1999). The need for team skills in TQM has led to increased attention to group process and interpersonal skills (Krumweide *et al.*, 1998). Indeed, a survey of *Fortune* 100 firms found that the most common training content for US organizations undertaking TQM consisted of interpersonal skills, including personal interaction skills, team leading, and team building (Olian and Rynes, 1991).

Team building efforts originally focused on social interaction skills, but more recent conceptions include attention to how work is completed, thus giving equal attention to both process and task (Phillips and Elledge, 1989). The TQM team literature generally focuses on teams of production workers, but team skills, including conflict management, are also needed in top management teams (Eisenhardt *et al.*, 1997a). Conflict may be: issue-oriented, substantive, or cognitive (focused on alternative courses of action and multiple interpretations of facts); or interpersonal or affective (focused on people, expressing interpersonal friction, personalized negative emotions, or situations of distrust or apathy). Research indicates that substantive conflict in management teams improves effectiveness, while affective conflict undermines performance (Amason, 1997; Amason *et al.*, 1995). Management teams that limit interpersonal conflict while encouraging substantive conflict are found to perform better (Eisenhardt *et al.*, 1997b).

Finally, successful TQM implementation often requires a cognitive stretch. This may involve acceptance of fundamental change, ability to integrate new schema with old (Bushe, 1988; Reger *et al.*, 1994), or a reframing of basic beliefs about the organization's identity (Reger *et al.*, 1994). These needs explain the widespread attention to organizational learning (Senge, 1994).

TQM and human development

It has been suggested that the affective, cognitive and behavioral prerequisites of leadership are abilities that develop as individuals grow in maturity (Harung *et al.*, 1995). The structural-developmental perspective (Kegan, 1982, 1994; Loevinger,

1976) holds that humans mature psychologically through an invariant sequence of stages. At less mature stages, people are more concrete and stereotypical in their thinking. More mature stages are characterized by more complex cognition and more open ways of socially relating to other people:

As people progress developmentally, their thinking becomes more complex and abstract, and paradoxically, more precise and specific. Correspondingly, they become increasingly able to empathize with others who hold conflicting views, to accept responsibility for the consequences of their actions, to act on perceptions of mutual interdependence, and to tolerate high levels of stress and ambiguity (Bartunek *et al.*, 1983, p. 274).

Research has identified the managerial behaviors, including both intrapersonal and interpersonal skills, correlated with different stages of development (Torbert, 1987). More advanced stages were found to be correlated with more comprehensive vision, more effective behavior and performance, and higher annual revenues (Hirsch, 1988). Although training in specific skills can improve the behaviors associated with a stage of development, it does not raise the underlying level of maturity (Merron *et al.*, 1987). This body of research suggests that more advanced stages of development provide the foundation for a wider range of effective managerial behaviors.

Developmental psychologists have, however, consistently observed that the natural process of maturation "freezes" after adolescence, even though there are higher stages of development that most people never reach (Alexander *et al.*, 1990; Orme-Johnson, 2000). Research indicates that human development generally remains stable throughout adult life (Cohn, 1998), unless advancement is fostered by appropriate developmental interventions (Alexander *et al.*, 1990). Torbert (1992) has argued that the modal stage of managers is several stages below that where the interpersonal, affective and cognitive skills needed for TQM become available. He suggests that "virtually all managers and all organizations must work through multiple developmental transformations to institutionalize CQI" (Torbert, 1992, p. 332).

One practice shown to be consistently effective in promoting transformational development across the lifespan is the

Transcendental Meditation[®] (TM[®] [1]) technique (Alexander *et al.*, 1990, 1991; Chandler *et al.*, in press). The Transcendental Meditation technique is a simple and easily learned procedure practiced for 20 minutes twice a day, sitting quietly with eyes closed. Taught in a standardized way by qualified teachers around the world, the practice requires no change in lifestyle, no special beliefs, and no effort.

The Transcendental Meditation technique, the most widely researched meditation program (Murphy and Donovan, 1996), is said to simultaneously develop “the individual’s latent creative potential while dissolving accumulated stress and fatigue” (Maharishi Mahesh Yogi, 1994, p. 261). Its effects in reducing stress have been well documented in randomized, controlled clinical trials (e.g. Alexander *et al.*, 1996; Schneider *et al.*, 1995), in other clinical research (for reviews see Barnes *et al.*, 1997; Jevning *et al.*, 1992), and at the worksite (Alexander *et al.*, 1993; Broome *et al.*, in press; DeArmond, 1996; Haratani and Henmi, 1990a, 1990b).

Research on the TM technique further indicates improved cognitive performance, including increased creativity (Travis, 1979), increased field independence (Pelletier, 1974), increased flexibility of perception and improved problem-solving ability (Dillbeck, 1982), increased orientation toward positive values (Gelderloos *et al.*, 1987), and increased fluid intelligence (Cranson *et al.*, 1991). Affective functioning has also been shown to improve: self-concept, self-actualization, and tolerance increase (Nidich *et al.*, 1973; Turnbull and Norris, 1982), while anxiety decreases (Eppley *et al.*, 1989).

The case below reports on members of a top management team who were practitioners of the Transcendental Meditation technique at the onset of a TQM initiative in their firm. The case suggests that the continuous psychological development of the top managers was a key factor in the continuous improvement in the organization. Below, the managers describe the challenges they faced in implementing a TQM program, the transformational shifts in the team that eventually allowed them to develop a quality policy and strategy, and their theories about why these shifts occurred. The subsequent discussion draws some conclusions about the potential role of the Transcendental

Meditation program in facilitating TQM implementation by promoting the leaders’ inner development.

Research methodology

Research setting and the respondents

The research was conducted in a power transmission company during the period 1989-1993. The company had been a division of one of Europe’s largest electrical equipment companies for many years. In the late 1980s, the parent merged with one of its rivals to create a worldwide competitor in power generation, transmission, and distribution, and this division became one of 15 profit-centers in its business group. In 1989, the company’s profits ranked low within its family of companies. In 1991, it generated \$US 228 million, or 3 per cent of the total revenues of its business group. By 1994, it ranked as one of the most profitable of the 1,500 companies within the new worldwide concern.

At the time of the study, the company employed 1,200 people: 300 at headquarters, and 900 at installation and service locations around the world. A total of 47 per cent of the employees possessed university degrees in technical fields. The respondents, members of the top management team, were Swedish males, age 42 to 52 years. They had been educated at technical universities and had been promoted to senior management from other positions within the worldwide organization.

Data sources

The case reported here is based on one team interview and five individual interviews conducted in English three years after the introduction of the Transcendental Meditation program in the company. The respondents reported their observations, reflections, and insights to the researcher. First, the interviewer used open-ended questionnaires to explore project development issues and investigate team interactions. Then the company President was asked to describe a “critical incident” (Flanagan, 1954; Gummesson, 1993) displaying changes in the team’s functioning over the three-year period. The President chose the process of designing and implementing a quality management

program. This issue was then raised in individual interviews with the other managers.

The case was drafted by applying the “constant comparative method” of grounded theory (Glaser and Strauss, 1967) to identify recurring concepts and patterns within the interview transcripts. The following story is a segment of the larger case history of this management team (Schmidt-Wilk, 1996).

The story

Training in the transcendental meditation program

The members of the Swedish top management team learned the Transcendental Meditation technique in the context of a leadership development program whose articulated goals were to reduce stress, improve relationships, and develop individual consciousness. A total of six managers volunteered to participate in the original course of instruction. Initially, they were highly skeptical about the TM program and somewhat distrustful of their consultant.

But over time, as they personally validated the claims of the practice, and received repeated encouragement from colleagues and repeated follow-up from their consultant, they became more trusting of their consultant and more regular in the practice. They reported their personal experiences of reduced stress during their first year of practice of the TM technique (Schmidt-Wilk, 2000). Satisfied with the results, they encouraged their colleagues to learn the technique. During the three-year period covered by the study, three courses of instruction for the top management team were held, taught by a management consultant who was also a trained teacher of the TM program. By the time of the final interviews, all 10 members of the top managers were TM practitioners, practicing with varying degrees of frequency.

Introduction of TQM

Under the directive of their corporate office, the Swedish managers began their TQM initiative by identifying timely delivery as their customer need. Consistent with the prescriptive literature on TQM, they then analyzed the processes involved in creating and installing power transmission systems. “It took one or one and a half years, but we have basically finished the analysis, so we now know what’s going on”, the President

reported, and as a result, “we have already reduced the delivery times partly, but as of next year our goal is to reduce delivery times over 50 per cent”.

The Swedish managers explained that their main challenges in designing and implementing a TQM program for their company lay not in the technical aspects of process improvement, but in their own interpersonal skills. They described unproductive conflict within the management team that arose whenever quality issues were addressed. They also described an abrupt shift that eventually occurred - from functional perspectives to cross-functional cooperation. This shift in attitudes and behavior allowed them to proceed in developing a quality policy and strategy.

High levels of team conflict

According to the managers, the top management team had consistently had high levels of conflict when discussing quality. The President explained:

One very important issue that we discussed for quite a long time is total quality management, or quality issues in general . . . and different members of the team had different views about the objectives, or the goal as such. Once we could manage to set up some goals or common objectives and then agree on that, then I found it was not that difficult to agree on how to get there. But this is one issue where we actually didn’t manage 100 per cent in the past to discuss it all the time in a constructive way . . . But we have now a quality policy and strategy agreed upon - a good one - and I have a feeling that we work very well now. But it took some time.

The President recalled that the conflict was “mainly between R&D people and our quality people”. He considered this polarization inevitable given the functional responsibilities of these two areas: “When focusing on the quality issues between these positions, it’s of course natural that you have some tense situations”.

The Industrial Countries Manager, who had been a member of the management team for two years, outlined the goals and the issues in the team:

Here in Sweden we have a product called T-50, which is a time-based management program. The aim of it is to reduce the cycle times by 50 per cent. And to be able to do that we have to increase the quality, and there comes the total quality management program. And the way we are working on it at the moment is to go through certification for ISO 9000. So that’s a part of the task we have in the management group.

Of course, there is a common goal to get this program implemented and to have the strategy, but it's also a fight between the business units and the R&D Department, because in the business units, we are the ones who are discovering the faults, and it's always a fight that they are not doing their job right introducing a lot of faults.

And I think we have had a lot of discussions, and still have, about level of quality on the software coming from the R&D department. And the R&D Manager is very often claiming that you should have the right quality, which probably includes some errors. Of course it's cheaper to take those errors in the product phase than to find them in the R&D phase. We in the business units are telling them that it's the opposite. So it has been a lot of discussions.

The Swedish managers described the affective nature of their conflicts about quality. The President chuckled as he recalled, "We had some tense situations where you could say that feelings, rather than facts were involved, and I think that's not so good". He suspected that underlying the substantive issues were anxieties, hurt feelings, and defensiveness:

... quality has been a part of this program for quite a long time. But it has been a kind of different philosophy in the R&D group and in the user group, you could say. And my personal feeling is it has more to do with rivalry, rather than facts. Because as soon as people start talking about quality, the R&D people feel that everybody is blaming only R&D people, but they are not. It seems to them that the others are saying "the quality of the product is not good enough, and so on". And they fear that they are the only one failing in this field.

The Human Resource Manager agreed. "It was very much a blaming system, so to say, blaming each other. I think that didn't affect the corporate climate well."

Transformational change

The team members also described an abrupt change in their behavior in the months just preceding the final interviews. They described an unexpected shift in their behavior in which they stopped blaming each other and focused instead on the substantive issues involved in TQM implementation.

Although the managers only noticed a decrease in the conflict in their team in the months just preceding the three-year interviews, an incident reported by the Human Resource Manager suggests that this process had actually begun earlier - even the first year that the managers were practicing the TM technique:

I remember [our consultant] asked the President's secretary if she could see an effect on the team. And she said that the team worked better together - there were less conflicts in the team after a while. That was her opinion. We couldn't see that ourselves.

Several managers described the more recent shift from functional perspectives and thinking to cross-functional cooperation as an attitude change. For example, the President explained:

I think in the last few months we managed to discuss it more rationally, not based on feelings and rivalries, but with the attitude that we are all in the same boat. We have quality problems on the R&D side. We have quality problems in the profit centers where projects are handled, and so on. So I think maybe we are now looking at the whole company and the problems we have and are not fighting so much between the departments.

Similarly, the Human Resource Manager reported:

People started to say, "quality is not just a problem in *that* department. I also have quality problems in *my* department". That's what happened. We started to stop blaming each other and started saying exactly that. That was an important ice-breaker. ... Before that everybody was just blaming the development department, and they just defended themselves. They had to defend themselves and nothing happened. Now we still have a lot of problems to solve, but we are more on speaking terms with each other.

He concluded by saying:

We found a way of not blaming each other and saying, "this is a company problem. We must solve it together". I think that was an attitude change, and we started talking to each other and tried to be not so quick at blaming, more finding solutions, and so on.

Most of the managers were not overly introspective or reflective about the change in their behavior. The Industrial Countries Manager's comment reflects the group's consensus: "Of course, there is a growing knowledge that we have changed". The managers did not appear to be concerned about determining why they had changed. It was sufficient for them that their behavior had changed and they were now effective and productive in developing their quality program.

Managers' theories about the transformational change

When queried about the cause of the change, two different perspectives emerged. One

perspective ascribed change to traditional management activities: retreats and seminars. The other perspective emphasized stress reduction and personal development.

The Human Resource Manager gave credit to the team's increased frequency of interaction. He thought that improved communication had come from making quality management an issue worthy of the team's attention, and resolution had come from "focusing on the question and spending time on dialogue". He valued the increased substantive interaction, pointing out that this process had helped the group develop acceptance of the change initiative. "We hadn't put in time on the issue before for the purpose of solving it. It was more a discussion of whether it is good or bad".

He explained that the team had spent two full days that winter focusing on quality. He and the Quality Manager felt that the first of these meetings, a retreat in the woods, "showed that there was no consensus". A subsequent seminar where the managers heard speakers from universities and other companies discuss quality initiatives allowed them to participate in group activities to formulate quality goals. Both the Human Resource and Quality Managers felt that the issues regarding quality crystallized in their minds during this seminar. The Quality Manager explained:

This is a method that has been very important for me for several years, and I can say that I have not felt I have had a real response from my colleagues before this [seminar]. [He sighed as he continued.] But after that meeting I felt there was a new view of it. And I succeeded to formulate this quality strategy for the company, and we reached a consensus on that.

The second theory offered about the reduced conflict reflected a stress reduction/developmental perspective. When asked, some of the managers explained that their practice of the TM technique might have affected their attitudes and therefore influenced team processes "indirectly". The President and the Quality Manager described the logical connections as they perceived them.

The Quality Manager first emphasized the importance of open communication. "One very important thing is that we are able to talk to each other, even if we have very different opinions. That means that somehow we *are* rather open to other ideas, at least open

enough to listen. Even if we fight against new ideas, then we listen, I think". He laughed as he concluded, "You never think of yourself as being very rigid or having difficulty to change your mind".

The Quality Manager also addressed the role of the team members' practice of the TM technique in fostering cognitive change. He discussed the increase in rational thinking that resulted from the reduction of stress in the nervous system. "If the others in the group are having the same experience as I have, if they suffer less from stress, I think that will make them more able to look at things logically. Because stress definitely blocks logical thinking".

The President commented on the role of the TM program in developing broader awareness and promoting more holistic functioning in the brain. Team members had ceased to focus on protecting their functional areas and started to think more comprehensively in terms of solutions for the company as a whole. He saw increased open-mindedness as the key that had allowed the R&D manager to drop his defensive stance:

I think it was other members of the group who took part in the process in a different way because they had become more open-minded. They understood that they had also quality problems, and so on.

He chuckled again as he described the changing dynamics in the team:

It was not only them pointing at Mr R&D but also discussing their own problems. And then I think it was much easier also for Mr R&D to take part in this and start looking at his problems because the others wanted to solve their problems. Then it became a different situation for the whole group.

He considered the role of the Transcendental Meditation program in promoting self-confidence and thus fostering the new, healthier attitudes:

Maybe Transcendental Meditation played a role because most of the other managers at least are fairly regular. Practicing TM helps increase your self-confidence, and when you are more confident then you don't have the need to point at the other people to protect yourself. You can admit "I have problems. I have to fix them". You can say, "You fix your problems, I fix mine". It seems that this attitude was new. And it seems this was the key.

The two theories espoused by the managers, the "more interaction" perspective and the stress reduction/developmental perspective,

are not incompatible with each other. As the discussion below indicates, one emphasizes activity, while the other provides a foundation for success in that activity.

Discussion

The Swedish management team experienced many of the behavioral and cognitive challenges reported in the TQM implementation literature. Yet, over the period of the study, they reported becoming more open-minded and creative in their thinking, more able to take initiative, and generally more competent in their roles as leaders. Their consultant noted that after the managers had been meditating for three years, “the maturity had grown to such a level that more insights into what to do with the company were there”.

This discussion explores the interpretation that the inner growth the Swedish managers experienced through their practice of the Transcendental Meditation technique which enabled them to meet challenges in ways not previously possible for them. The transformation described by the management team appears to have been a collective phenomenon that occurred in two phases. The first phase involved moving from a narrow focus on self- and department-protection to a collaborative, cross-functional perspective. The second phase involved directing that cross-functional exchange towards fulfilling a common strategic purpose.

Breakthroughs in the management team

Initially, the managers appeared to be constrained by the functional perspective: managers locked into managing their vertical hierarchies generally have difficulty understanding cross-process issues. However, these managers described themselves becoming more receptive and open and increasingly able to listen non-defensively. The ability to engage in open exchange is a prerequisite for cross-functional teamwork and was the first breakthrough in the Swedish team’s functioning. It appears that inner attitudinal changes allowed the managers to relinquish their blame orientation and fostered behavioral changes characterized by improved listening and more open exchange.

This kind of behavioral change is consistent with published research on the effects of the Transcendental Meditation technique cited above and with reports from other top management teams that implemented the TM program (Schmidt-Wilk, 2000). It is also a common prescription in TQM training because many implementation failures can often be attributed to turf-protection and other dysfunctional behaviors in the work place.

The second breakthrough in this case came when the Swedish managers could comprehend the multiple functional issues in the context of the company’s resources, strategy, and the business environment. This breakthrough allowed them to formulate and reach consensus on a company-wide quality management program. This type of strategic thinking is vital for the success of any organization’s TQM effort, but it is less tangible and more subtle than the behavioral changes associated with the first breakthrough. It is a characteristic of the developmental transformation from the modal level of managerial development to the greater psychological maturity that Torbert (1992) identified as prerequisite for effective TQM implementation. Managers at this stage of development, termed “Strategist” by Torbert (1987), are described as having the ability to reframe situations, define new, i.e. path-finding opportunities, view situations independently, and empower others. They are concerned with the total organization in its environment, are aware of paradox and contradiction, and display role flexibility and creative conflict resolution.

Development of consciousness

Traditional theories about managing conflict propose that situational tactics, such as creating frequent interactions and cultivating distinct roles that force managers to recognize and consider multiple perspectives, will expand the consideration of substantive alternatives related to a management issue and simultaneously lower the emotional barriers to conflict (Eisenhardt *et al.*, 1997a). Such a perspective could hold that the second breakthrough came from devoting time and attention to the issues, or from working together on a critical issue; when the quality seminars provided new information, the managers were able to recognize the issues and come to a consensus.

According to the developmental perspective, change is promoted from within; outer events allow its expression. Developmental psychologist Kegan has observed that growth toward leadership requires not merely “a new set of skills to be ‘put in’ but a new *threshold of consciousness*” (Kegan, 1994, p. 165, italics in original).

Consciousness may be thought of as the “background” on which experience takes place. Consciousness may be “dull, drowsy, or clear” (Maharishi Mahesh Yogi, 1993). When consciousness is dull or drowsy, one may miss, misunderstand, or fail to integrate information and thus act on the basis of partial or incomplete knowledge. By contrast, when consciousness is clear and alert, then one easily grasps and integrates concepts and ideas, and makes decisions from a broader perspective.

According to its founder, the Transcendental Meditation technique systematically gives direct experience of the foundation of consciousness, an unlimited field of transcendental consciousness, at the basis of the mind:

During this technique the individual’s awareness settles down and experiences a unique state of restful alertness; as the body becomes deeply relaxed, the mind transcends all mental activity to experience the simplest form of awareness - transcendental consciousness - where consciousness is open to itself. This is the self-referral state of consciousness (Maharishi Mahesh Yogi, 1995, p. 174).

This state of awareness is described as simplest because consciousness is silent and fully awake to itself alone, without reference to any thought or perception. It is described as transcendental because it is beyond thought and perception, and as self-referral because it refers only to itself, not to any content of thought or perception. The full potential of the mind is said to be available in this state. The research cited above indicates that having the experience of transcendental consciousness results in release of stress, increased vitality, improved health, and a more nourishing working environment.

The Transcendental Meditation technique is also said to foster evolutionary change and transformation, as seen in the Swedish case:

Transcendental Meditation is the promoter of evolution through which life is ever sustained in progress. Transcendental Meditation produces transcendental consciousness - self-referral

consciousness - in which all transformations take place (Maharishi Mahesh Yogi, 1995, p. 179).

We are accustomed to identifying outer events as causes; the backdrop of consciousness is not commonly appreciated. Consciousness does not get the credit it deserves as the causal factor of transformations in the outer field of daily life. Transcendental consciousness is not manifest; it is not perceived by the senses but by the mind when the attention is turned within and the mind is at its most settled state. The unmanifest field remains unmanifest, even as the source of manifest change.

The quietly growing experience of consciousness may not be recognized as the source of greater appreciation, clarity of mind, fewer stresses in emotional realm, or more harmonious behavior with family and colleagues. Instead, events such as workshops or seminars, or some words spoken, or taking time for discussion are commonly seen as causes, but they are events that fall on a canvas that is ready to capture them. Then the specific events function as catalysts and sudden transformations are seen.

Comparison with extant literature

This case study suggests that the Swedish leaders became more effective in their management tasks as they grew in consciousness. This perspective is consistent with published research on the effects of the TM technique, such as two leadership studies that relate directly to the two breakthroughs discussed above, and several studies on adult development, which are summarized below.

A study of leadership behaviors in employees in a US firm in the food industry found that those who learned the TM technique improved significantly more than controls over an eight-month period in their expression of leadership behaviors, as measured by the “leadership practices inventory” (Kouzes and Posner, 1990): encouraging the heart, enabling others to act, modeling the way, challenging the process, and inspiring a shared vision. When interviewed, the new meditators also described increased comfort in taking initiative, increased ability to negotiate, increased ability to think clearly, increased energy, and decreased tendency to be affected by stress (McCullum, 1999).

A pre-post study in a Swedish public utility evaluated the change in “holistic thinking” in a team of divisional managers who learned the Transcendental Meditation technique by asking corporate executives to analyze their responses to a series of “big topics” such as, “Which goals and business areas do you think the corporation put the highest priority on today?” and “What are the most important environmental factors for the division today?” The executives, who were blind to the purposes of the study, rated the team as having increased in holistic thinking over a period of seven months “in terms of improved feeling for the wholeness of the company’s situation” (Gustavsson, 1990, p. 14).

This concrete example of increased strategic thinking is supported by a ten-year longitudinal study on college graduates. This prospective study found that graduates who practiced the TM technique advanced to levels of maturity that are generally rare in the population, compared to three control groups matched for gender and age over the same time period, as measured on a standard instrument of development. The TM subjects also increased to very high levels of intimacy and principled moral reasoning (Chandler *et al.*, in press).

Similarly, in two samples of maximum security prisoners followed over one-year periods, both long-term and new Transcendental Meditation subjects significantly improved by one stage of development compared to wait-list controls, dropouts, and those not interested in learning the TM technique. None of four other treatment groups followed changed significantly on this measure (Alexander and Orme-Johnson, in press). The authors of these studies suggest that development is stimulated by the experience of transcendental consciousness through the Transcendental Meditation technique.

Conclusion

This article suggests that the inner growth the managers experienced through their practice of the Transcendental Meditation technique enabled them to meet challenges in their work in ways not previously possible for them. It draws upon the theory and research of developmental psychology to suggest that the cognitive and behavioral prerequisites of

TQM become available when the prerequisite level of maturity becomes available. Before that, managers may pay lip service to the principles and injunctions of TQM, but their repertoire of skills remains limited. They will not be able to think strategically – beyond the borders of their functional responsibilities, engage in open communication, nor act collaboratively. The principles of TQM will remain abstract concepts; they will not become translated into effective action.

However, in this case study, the psycho-physiological reduction of stress that resulted from the managers’ practice of the TM technique appears to have allowed a natural process of growth and development to unfold. Then the managers’ on-going emotional, social, and cognitive development enabled them to reduce interpersonal conflict, focus on substantive issues, think strategically, and design and implement a new program of quality management.

This case suggests that management teams engaged in implementing complex management systems such as TQM would benefit from learning the TM program to promote inner development at the same time that they apply management systems for outer progress and success.

Note

- 1 Transcendental Meditation and TM are registered trademarks licensed to Maharishi Vedic Education Development Corporation and used with permission.

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