CHAPTER - 6

FINDINGS, SUGGESTIONS AND CONCLUSIONS

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6.1: Findings of the Study

Based on the theoretical and empirical evidences, following findings have been identified:

1. The research work started with the article “Does TQM influence employee’s job satisfaction?” (Ooi et al. 2005). Further, insights are drawn from an article on “Proactive coaching for employee development and improved business results” (Bourg et al. 2010), which emphasizes the need for training employees for TQM.

2. In the literature review, the researcher could identify the “Soft” factors are more important than the hard factors of TQM (Vouzas & Psychogios, 2007; Shahin & Dabestani, 2011; Tripti Singh & Geetika, 2011). Further it could be found that if the “Soft” factors of TQM are managed professionally, they have a positive impact on job involvement, career satisfaction and organizational commitment (Alireza et al. 2011).

3. The key human resource factors which are important for TQM implementation are:
   a. Total means everyone in the organization is involved in the final product or service to the customer.
   b. Quality means conformance to requirements which are measurable and manageable.
   c. Management means TQM does not happen by accident. It is a managed process which requires total involvement.
4. HRM is a system that includes empowerment, job autonomy, communication, teamwork, planned training, development, and reward and recognition based in the contributions of employees. The quality-oriented HRM system of practices has a positive effect on TQM.

5. The “Employees Empowerment” is found to be important from the literature review. Employees should be empowered to make decisions on the matters of quality and encouraged to propose solutions related to their work problems. It is suggested that through effective communication and improved project coordination, workers must be motivated to improve their work performance.

6. Further the researcher could identify an interesting the article on “A review on an Employee Empowerment in TQM practice” (Thamizhmanii & Hasan, 2010). The article asserts that “Empowerment means engaging employees in the thinking processes of an organization. Empowerment requires a change in an organization culture, an employee empowerment is necessary for the effective functioning of the skill of employee. Each employee in a team should be given a chance to act mentally to achieve their goal or targets”.

7. Training of employees is crucial for building the 'human capital' of the organization and this practice is necessary to implement TQM successfully with new techniques. Training should focus on building quality skills with equal attention paid to behavioral skills and quality tools needed for change in performance management and recognition. Training includes explanation of overall company operations and product quality specifications. Specific measures for evaluating training include the time and money spent by organizations in training
employees and management in quality principles, problem solving skills, and teamwork.

8. Human Resource Development (HRD) is the latest evolutionary stage in the long tradition of training, educating and developing people for the purpose of contributing towards the achievements of individual, organizational and societal objectives. HRD function attains it needs to survive and to have a long term impact on overall business performance and respond to significant competitive and technological pressures. HRD is generally stated as a systematic and planned effort to modify or develop knowledge, attitudes, abilities and skills through learning experiences, to attain effective performance in an activity or a range of activities. Training and development as a process of systematically developing work-related knowledge and expertise in people for improving performance.

9. Total Quality Management, as a management philosophy that concerns the overall organizational quality through continuous improvement to achieve a high level of customer satisfaction. The 17 TQM practices are; Top Management Commitment, Customer Focus, Training and Education, Continuous Improvement and Innovation, Supplier Management, Employee Involvement, Information and Analysis, Process Management, Quality Systems, Benchmarking, Quality Culture, Human Resource Management, Strategic Planning, Employee Encouragement, Teamwork, Communication, and Product and Service Design. And the main TQM elements are: Commitment of the highest authority, Continual Improvement through the Application of Scientific Knowledge and Incorporation of the Employees.
10. The core objective of TQM is to guarantee that every employee is conscious that he belongs to an internal continuous chain of customer-supplier relationships and that his full involvement is essential for quality improvement. The incentives are that TQM generates improved quality of products and services, raises production performance, and reduces costs, thus improving business competitiveness.

11. The main TQM elements are: commitment of the highest authority, continual improvement through the application of scientific knowledge and incorporation of the employees. Further its aim is achieving customer satisfaction therefore regular research work is done by collecting customer feedback and by doing market survey.

12. The nine key dimensions of TQM in IT-Sector are: 1) Total Employee Involvement, 2) Continuous Improvement, 3) Continuous Training, 4) Teamwork, 5) Empowerment, 6) Top-Management Commitment and Support, 7) Culture Change, 8) Democratic Management Style and 9) Customer Satisfaction.

13. The researcher could identify the reasons for practicing Six Sigma and Lean Six Sigma in IT-Sector rather than other TQM concepts. Six Sigma is a widely used process improvement tool and it provides excellent results. TQM concepts focus on the continuous improvement of processes whereas Six Sigma and Lean Six Sigma focus on reducing process variations. Organizations use Six Sigma when the process is mature and variations become the focus.

14. Through the survey conducted, it could be found out that the rate of response from the respondents varied depending upon the domain to which they belonged i.e., response rate of BPO
constituted 32.6%, Engineering R & D 19.9%, IT 18.4%, Product and Development 16% and others 13%. BPO employees come directly in contact with customers and customers are the key factors in continuous quality improvement.

15. Most responses are from the Small and Medium size companies (69.5%), as most IT-Sector companies are small and medium size in Bangalore.

16. The highest response rate received is from Operational and Middle level employees (88.0%). As these level employees interact with the customers and they are in a better position to understand the customer’s requirements.

17. Most of the respondents belong to an age group from 25 to 40 years (67.7%). It is a fact that the IT-Sector requires young and dedicated employees to contribute for the growth of the organization.

18. Most of the respondents are Graduates and Post-Graduates (67.4%), as the minimum criteria to seek job in IT-Sector with consistency in performance. The other includes: Ph.D., Charted-Accountant and Cost Accountants.

19. The highest rate of response has come from the employees’ with an experience of 5 to 15 years (66.6%). The experience of the employee’s influence to better understand the quality maintained in the in IT-Sector.

20. Most of the respondents are in favour of the Training and Development provided by the organization (92.5%), as the respondents have work experience in the same organization for more than five years. The respondents are in favour of the
TQM concepts training, as it is mandatory to maintain quality in IT-Sector.

21. The most of the IT-Sector companies are practicing Six Sigma and Lean Six Sigma concepts to improve business process (57.8%). But there is drastic decline in ISO-certification. But, nearly 13% of the companies have registered for the ISO/IEC 27001.

22. 87.6% of the respondents opine that the organizations/companies in which they are working provide TQM training regularly. And 67.7% opine that it is frequent and regular too.

23. The study postulated 5 main hypotheses. The empirical evidences have supported the theoretical relationship proposed in these hypotheses. The results established that the profile of the IT-Sector, Member distribution by Size are dependent on TQM practices are significant. The employee’s qualification, employee’s level and employee’s experience are dependent on perception of TQM practices in IT-Sector.

24. The Training & Education (HRD) shows high degree of positive correlation with Employee Involvement (0.89) and is significant. And other factors have shown moderately positive correlation with Training & Education and all are significant in IT-Sector.

25. The parameter, ‘Visionary & Leadership Commitment’ shows the high degree positive correlation with Organization Infrastructure, Customer Involvement, Cultural Change, Linking TQM Process Improvement and Benchmarking and is highly significant in IT-Sector.

26. The Project Planning & Management skills have moderate positive correlation with, Cultural Change, Linking TQM
Process Improvement and Benchmarking and are highly significant. The parameter, ‘Understanding TQM Methodology’ shows high degree of positive correlation with Customer Involvement and is highly significant. The Project Prioritization & Selection shows high degree of positive correlation with Customer Involvement and are highly significant. The parameter ‘Organizational Support’ shows high degree of positive correlation with Customer Involvement and is highly significant. The ‘Customer Involvement’ has high degree of positive correlation with Cultural change, Linking TQM Process Improvement and Benchmarking and are significant. The Linking TQM Process Improvement and Benchmarking show high degree of positive correlation with Customer Involvement and are highly significant in IT Sector.

27. The results of the study provided strong empirical support for forward horizontal model (path) of Training & Education (HRD) for TQM between different dependent variables and independent variables, validated by confirmatory factor analysis. The measurement items associated with all constructs were identified as reliable and valid indicators of the conceptual domain underlying the model. The results of path analysis show positive correlation and are statistically significant among variables of Training and Education (HRD), Understanding TQM Methodologies, Project Planning & Management, Benchmarking, Project Prioritization & Selection, Linking TQM to Process Improvement, Customer Involvement, Cultural Change and Quality Culture. Hence the Training & Education with TQM’s critical factors establishes the Quality Culture in the IT-Sector.
6.2: Suggestions

Based on the research findings and empirical evidences of the study, following suggestions are made:

1. Top leadership is the driving force for planning to develop employees for TQM. Leaders should articulate and communicate quality vision, mission and values that give the directions to employees at all the levels to achieve quality especially in IT-Sector.

2. Customer satisfaction is the ultimate goal of TQM programmes. Organization’s long term success is tied to customer retention efforts. The customer retention is possible, if the customer requirements are shared to the internal customers. Hence, the organizations should be basically quality-driven.

3. The organization’s infrastructure is most essential for training and also to achieve TQM. Organizational infrastructure includes all the basic and essential critical factors. Hence, the organization should provide such infrastructure to employees to achieve the TQM objectives.

4. The TQM is continuous improvement, only the high performing organization creates the quality culture. The quality improvement is not a destination but it is endless journey, hence, the organization should see that the training reaches to all the employees. If unreached, it ill-speaks on quality culture.

5. Six Sigma and Lean Six Sigma concepts are the most widely used TQM concepts for executing projects in IT-Sector. And communication is the important factor for successful completion of the projects. Hence, the project leader (Six Sigma Black Belt) should communicate with project team members.
Failing in which leads to inadvertent delay in completion of the projects as well as it will have adverse effect on financial compliance.

6. One of the interesting observations the researcher has made during the survey that most of the rewards and recognition are conferred on the team leader and not for all the team members. Hence, it is advised to consider all the team members whose contributions are worthy too.

7. The researcher observed that, the internal team leader or Six Sigma Black Belt should provide the training to the internal employees, as the most of the employees are trained from the external resources or from external consultancy or agency. Because, the external resource expertise would be unaware of the business processes or operational processes in which these employees are working.

6.3: Conclusions

The main focus of the research is to know the need & significance of the Training & Education (HRD) for TQM in IT-Sector, as quality is important in the IT-Sector. Based on the research, a conclusion can be drawn that training & education for TQM is important. The development of employees leads to change in the organization culture and also within the employees. The culture change leads to the enhanced quality culture in the organization.

6.4: Direction for Future Research

Developing the Human Resources for TQM is a challenging issue in IT-Sector; as TQM philosophy seeks continuous improvement in every facet of organizational life through internal and
external stakeholders involvement, commitment and collaboration with a view to achieve excellence. The analysis of the results of the study offers challenges and opportunities by providing an objective assessment of Developing Human Resources for TQM in the IT-Sector. The study findings also offer opportunities to address the issues and take appropriate actions to make the IT-Sector quality driven. Based on the intensive literature review and the insights gained during this research, the following are suggested for future research considerations:

1. In IT-Sector, most of the issues are resolved through projects. As the projects are short-lived, training and developing employees for projects would be the best option for the companies. Because they can better handle the projects after training.

2. As most of the IT-Sector companies are practicing Six Sigma and Lean Six Sigma concepts widely, there is ample scope for future research in “HRD for Six Sigma”. As, the Six Sigma concept requires to understand the statistical concepts and to implement the same in real-life situations.

3. One more challenge lies for future research in the area of implementing the Capability Maturity Model (CMM). Employees are required to be trained at all the levels of implementation which is conspicuously absent in the present situation and the same is proved empirically in the sample IT-Sector companies chosen for the study.