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13.1. Introduction

This research work was started at the time when TPM concept has been established as a world-class manufacturing strategy. In India, where the author resides, during the past two decades, both theoreticians and practitioners had been nourishing the merits of TPM programmes. Many Indian companies have been actively implementing TPM concepts. In few cases, training programmes in TPM are being conducted by the experts drawn from Japan. Now, TPM concepts have spread across the world. However, it is reported that a considerable number of companies have failed to yield the expected results through TPM implementation. It is also observed that many of the TPM implementing companies are unable to implement it in full swing. The survey results conducted during the beginning phase of this research work corroborate this observation. One of the reasons for this situation is the absence of customer focus in TPM. In this contemporary business scenario, customer has become the center tenant of business. Hence, it is concerning that TPM is devoid of customer appraisal principles.

On studying, the author understood that the proponents of TPM have integrated TQM philosophy with maintenance engineering principles. In this context, the author realized that TPM programmes are not exhaustive for they have not been integrated with all the features of TQM. If the same techniques used in TQM are also used in TPM project, then it will not only result in savings but will also ensure higher success rate. In this context, the author believed that TPM concepts are imperative but should be subjected to improvement and modification to ensure focused application. Particularly, TQM researchers have enunciated the technique QFD as an ideal one to take care of the voice of customers. Thus the author proceeded this research work with the proposition that if QFD principles are integrated in TPM by suitable means, it can overcome the lacunas of TPM. Subsequently, the author designed MQFD model, which formed the foundation of this work.
13.2. Receptivity of the Research work

In order to test the receptivity and practical validity of MQFD model, investigations were conducted. Although practical implementation could not achieved on full scales, the results of these investigations revealed that the elements of MQFD model could be successfully implemented in companies. Meanwhile, the author submitted the details of the research work to various podiums. Particularly, three peer-reviewed papers were published in three UK based international journals namely International journal of process management and benchmarking, International journal of management practice and 'journal of quality in maintenance engineering'. Some more papers have been communicated to the in International Journals, which are under review. These developments indicate the favorable receptivity of MQFD and its elements among academicians, researchers and practitioners.

In order to test the validity of MQFD model in total, an explorative study was conducted. The results of this study also indicated the possibility of successfully applying MQFD model in companies. Much more thrust is needed to effect the percolation of MQFD model in real time environment. The author has recommended the future researchers to work in this direction under the next section. In this background, the author believes that this research work has resulted in the evolution of practically compatible and useful MQFD model, which would be useful to both theoreticians and practitioners.

13.3. Future scope of research

This research work has created an avenue for carrying out further work in the same direction. In order to make the MQFD model a dent in practical arena, the author advises the future researchers to contact the professional bodies like Japanese Institute of Plant Maintenance and appraise the details of MQFD. These researchers may develop strong relationships with practitioners and implement MQFD in their working environments. Though the implementation studies proceeded without any hitches, it was found that the mathematical calculations dominate the application of MQFD. Thus there exists
every possibility that an executive who is busy with routine activities will stay from involving the AHP application study on MQFD. In this direction the utility of executive support system (ESS) being reported in literature requires recognition (Turban and Walls, 1995, Nord and Nord, 1995, Huang and Windsor, 1998, Watson and Rainer, Jr, 1991, Rainer and Watson, 1995). At this juncture, the author appraises that an ESS would be adding strength to the successful adoption of AHP MQFD programme in companies. In literature, the author requests that the future researchers can develop ESS on MQFD by incorporating the latest IT devises. This will ensure that MQFD is implemented with the support of the chief executive officers and executives in companies in sustained manner to yield continuous maintenance quality improvement.

13.4. Concluding Remarks

The main contribution of this research work is the MQFD model. The receptivity of this model has been so good that the scholarly anonymous reviewers recommended the publication of five papers containing the features of MQFD model in four international UK based Journals. Further, despite the week link existing between the engineering education and the industry, the author strived to test implement the MQFD model in typical companies. The author also employed the way of applying MQFD model in engineering educational scenario to enhance the quality of engineering education. Further the author has been seeing the failure reports of revolutionary principles and models like TQM, BPR and quality circles. In order to prevent the failure of MQFD model, the author has contributed the strategic receptivity scorecard approach. In order to fit MQFD in varied organizational cultures, the author has shown the way of applying AHP technique so as to ensure the successful implementation of MQFD. Thus the contributions of this research work are not only validated for their application feasibility, the derailment of their successful implementation is also prevented by using the two tools namely strategic receptivity scorecard and AHP. The fruitfulness of the contributions of these research work would be realized when MQFD is popularized among both researchers and practitioners and implemented in practical fields.