ADOPTION OF TQM PRACTICES AMONG EMPLOYEES WITH REFERENCE TO MANUFACTURING SECTOR IN COIMBATORE

Dr. S. Usha* & V. G. Geetha**

* Associate Professor, Department of Management Studies, Madras University, Chennai, Tamilnadu
** Scientific Regulatory Officer

Abstract:

Total quality management or TQM is an integrative rationality of management for consistently enhancing the quality of items and procedures. It is utilized around the world.TQM capacities on the start that the quality of items and procedures is the obligation of everybody who is included with the creation or utilization of the items or administrations offered by an association. The main objective of the study is to know about the Adoption of TQM in the manufacturing companies and to analyse the level of acceptance of employees towards TQM in their manufacturing companies. It is important to understand employee acceptance of TQM to ensure Quality improvement culture on process and focus on customer requirement. For this purpose a sample of 80 was collected with employees and 20 was collected with top level management were percentage analysis, Anova, multiple regression and t-test were used as tools to analyse the data. The conclusion is that when compared with other dimensions on survey, employees participative decision making has the highest impact with demographic profiles and other factors related to TQM. It shows that employee participation can be taken into the decision making process of company practices, when compared with other dimensions related with top level management. The TQM policy has been implemented effectively in the manufacturing companies but management has to give more training so that the knowledge about TQM can be increased further in future.

Key Words: Quality, Adoption & Decision Making

Introduction:

Total quality management or TQM is an integrative theory of management for constantly enhancing the quality of items and procedures. It is utilized around the world.TQM capacities on the start that the quality of items and procedures is the obligation of everybody who is included with the creation or utilization of the items or administrations offered by an association. At the end of the day, TQM gains by the contribution of management, workforce, providers, and even clients, keeping in mind the end goal to meet or surpass client desires. Thinking about the acts of TQM as talked about in six exact examinations, Cua, McKone, and Schroeder (2001) recognized the nine normal TQM rephrases as cross-practical item configuration, process management, provider quality management, client association, data and input, conferred authority, vital arranging, cross-useful preparing, and representative contribution. Total Quality Management (TQM) is an approach that looks to enhance quality and execution which will meet or surpass client desires. This can be accomplished by coordinating all quality-related capacities and procedures all through the organization. TQM takes gender at the general quality measures utilized by an organization including overseeing quality plan and advancement, quality control and support, quality change, and quality affirmation. TQM considers every single quality measure taken at all levels and including all organization workers.

Statement of Problem:

Total quality management (TQM) is an approach to improve the competitiveness, effectiveness, and flexibility of a whole organization. It is essentially a way of planning, organizing and understanding each activity, and depends on each individual at each level. TQM is mainly concerned with continuous performance improvement. To achieve this, people need to know what to do, how to do it, have the right tools to do it, and be able to measure performance and receive feedback on current levels of achievement. The main problem of the study is to find out the quality aspects based on various dimensions used in TQM in the manufacturing companies.

Objectives of the Study:

- ✓ To know about the Adoption and implementation of TQM practices among employees in the manufacturing companies.
- ✓ To analyse the level of acceptance of employees towards TQM in their manufacturing companies.
- ✓ To suggest the manufacturing companies about perception of employees towards effectiveness if TQM in their manufacturing companies.

Limitations of the Study:

- ✓ The study is limited to only one manufacturing companies.

International Journal of Current Research and Modern Education (IJCRME)
Impact Factor: 6.925, ISSN (Online): 2455 - 5428
(www.rdmodernresearch.com) Volume 3, Issue 1, 2018

✓ The sample size is limited to 100 and that may be a bias of the study.
✓ The study period is around 3 months and a deep analysis about the research cannot be made.
✓ Respondent may fail to express their opinions and beliefs.

Research Methodology:
It constitutes the blueprint for the collection, measurement and analysis of data. Thus research design is a conceptual framework within which the research is conducted.

Descriptive Study:
The present study attempts to assess the Total Quality Management in the manufacturing companies. It tries to assess the Adoption of TQM of the organizations. Hence it is a descriptive study.

Sources of Data:
For any research it becomes necessary to collect the data that are appropriate. Depending upon the sources of information available data can be classified as,
✓ Primary Data
✓ Secondary Data

Primary Data: The primary data are those, which are collected for the first time by the researcher. It is the fresh data. It was collected by administering questionnaire from the employees.

Secondary Data: It refers to the already existing data. This study uses the internet, books, Published articles, journals, and Newspaper articles methods to collect the data.

Data Collection Procedure Used in the Research:

Questionnaire: Questionnaire is used to collect the data for the study. Two questionnaire were formulated to collect the data respectively from Middle management and operational level employees.

Types of Sampling Used for the Study: Random sampling

Sample Size: Using random sampling method 80 respondents were selected from operational level employees and 20 were selected from middle level management of the manufacturing companies.

Analysis and Interpretation:

Demographic Profile of the Respondent:

		No. of Respondents	Percent
Gender	Male	56	70
	Female	24	30
	Total	80	100
Age	18 - 25 yrs	3	3.8
	26 - 35 yrs	29	36.2
	36 - 45 yrs	24	30
	above 45 yrs	24	30
	Total	80	100
Educational Qualification	Primary	2	2.5
	Secondary	3	3.8
	UG	44	55
	PG	31	38.8
	Total	80	100
Marital status	Married	29	36.2
	Unmarried	51	63.8
	Total	80	100
Income level (Rs)	Below 4000	2	2.5
	4000-6000	2	2.5
	6001-8000	46	57.5
	8001-10000	30	37.5
	Total	80	100
Experience	less than 1 year	2	2.5
	1-3 yrs	28	35
	3-5 yrs	25	31.2
	above 5 yrs	25	31.2
	Total	80	100

Interpretation:
It is found that 70% of the respondents belong to male and 30% of the respondents belong to female. 3% of the respondent belongs to the age group of 18-25 yrs, 29% of the respondent belong to the age group of 26-35 years, 24% belongs to the age group of 36-45years and 24% belongs to the age group of above 45 years. 2% of the respondent had primary school education, 3% of the respondents had completed secondary school education, and 44% of the respondent have qualified under graduation, and 31% of the respondent have

qualified post graduation. 36.2% of the respondents are married and 63.8% are unmarried. 2% of the respondents belong to the income group below Rs.4000, 2% of respondents belong to the income group of Rs.4000 - 6000, 46% and 30% of the respondent belongs to the income group of Rs. 6001-8000 and Rs.8001-10000 respectively. 2% of the respondent have less than 1 year of experience, 28% of the respondent have 1-3 years of experience, 25% of the respondent have 3-5 years of experience, 25% of the respondent have more than 5years of experience.

Independent Samples Test:
Gender and Dimensions of Total Quality Management:
- ✓ Ho1= There is no significant difference between gender and awareness of TQM.
- ✓ Ho2= There is no significant difference between gender and employee involvement.
- ✓ Ho3= There is no significant difference between gender and focus on training.
- ✓ Ho4= There is no significant difference between gender and participative decision making.
- ✓ Ho5= There is no significant difference between gender and interpersonal relationship.

Age and dimensions of total quality management – T Test Results

Dimensions of TQM	Gender	N	Mean	Std. Deviation	T	Sig at 5% Level
Awareness of TQM	Male	56	2.6393	0.72103	-1.847	0.486
	Female	24	2.9833	0.85652		
Employee Involvement	Male	56	2.7679	0.60876	-1.64	0
	Female	24	3.05	0.89491		
Focus on Training	Male	56	2.7821	0.62117	-0.124	0.446
	Female	24	2.8	0.51415		
Participative Decision Making	Male	56	2.8821	0.61114	-2.23	0.328
	Female	24	3.2	0.51415		
Interpersonal Relationship	Male	56	2.9929	0.65612	-0.821	0.018
	Female	24	3.1167	0.51724		

The results for gender and employee involvement shows P value as 0.000 which is lesser than 0.05 with t value -1.640.Therefore the hypothesis Ho2 is rejected and it can be concluded that there is significant difference between males and females with reference to level of employee involvement. The results for gender and interpersonal relationship shows P value as 0.018 which is lesser than 0.05 with t value -0.821.Therefore the hypothesis Ho5 is rejected and it can be concluded that there is significant difference between males and females with reference to level of interpersonal relationship.

Anova Results:
Comparison between Age and Dimensions of TQM:
- ✓ Ho6= There is no significant difference between age and awareness of TQM.
- ✓ Ho7= There is no significant difference between age and employee involvement.
- ✓ Ho8= There is no significant difference between age and focus on training.
- ✓ Ho9= There is no significant difference between age and participative decision making.
- ✓ Ho10= There is no significant difference between age and interpersonal relationship.

It shows that with reference to Awareness of TQM, Employee involvement, Focus on training, Participative decision making and Interpersonal Relationship there is significant difference in the mean scores with different age group as the significance value is less than 0.05. Further it also depicts that, there is significant difference among different age group with reference to Awareness of TQM, Employee involvement, Focus on training, Participative decision making and Interpersonal Relationship. Therefore hypothesis Ho is rejected.

Age vs Dimensions of Total Quality Management - ANOVA Results:

Age (in years)	N	Dimensions of TQM									
		Awareness of TQM		Employee involvement		Focus on training		Participative decision making		Interpersonal Relationship	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
18-25	3	2.40	0.00	3.80	0.00	3.20	0.00	3.20	0.00	3.60	0.00
26-35	29	2.39	0.86	2.42	0.52	2.57	0.44	2.81	0.36	2.73	0.60
36-45	24	3.26	0.55	3.53	0.48	3.33	0.46	3.42	0.52	3.30	0.51
Above 45	24	2.68	0.62	2.56	0.51	2.45	0.47	2.70	0.68	3.03	0.61
Total	80	2.74	0.77	2.85	0.71	2.78	0.58	2.97	0.59	3.03	0.61
F		7.260		27.837		19.094		9.259		5.427	
Sig at 5% level		0.000*		0.000*		0.000*		0.000*		0.002*	

International Journal of Current Research and Modern Education (IJCRME)
Impact Factor: 6.925, ISSN (Online): 2455 - 5428
(www.rdmodernresearch.com) Volume 3, Issue 1, 2018

The mean scores of different age group imply that Awareness of TQM, Focus on training, and Interpersonal Relationship is high with the age group 36-45.

The mean scores of different age group imply that Employee involvement and Participative decision making is high with the age group 18-25. The results for age and awareness of TQM shows level of significance as 0.000 which is less than 0.05 with f value 7.260.Therefore the hypothesis Ho6 is rejected and it can be concluded that there is no significant difference between age and awareness of TQM. The results for age and employee involvement shows level of significance as 0.000 which is less than 0.05 with f value 27.837.Therefore the hypothesis Ho7 is rejected and it can be concluded that there is no significant difference between age and Employee involvement. The results for age and focus on training shows level of significance as 0.000 which is less than 0.05 with f value 19.904.Therefore the hypothesis Ho8 is rejected and it can be concluded that there is no significant difference between age and focus on training. The results for age and participative decision making shows level of significance as 0.000 which is less than 0.05 with f value 9.259.Therefore the hypothesis Ho9 is rejected and it can be concluded that there is no significant difference between age and Participative decision making. The results for age and interpersonal relationship shows level of significance as 0.002 which is less than 0.05 with f value 5.247.Therefore the hypothesis Ho10 is rejected and it can be concluded that there is no significant difference between age and interpersonal relationship.

Multiple Regressions:

Age and Dimensions of Total Quality Management:

It reveals that dimensions of total quality management account for 16.8% of variance in Awareness of TQM, Employee involvement, Focus on training, Participative decision making and Interpersonal Relationship. It could be found that the variable 'Awareness of TQM' explains 3.8% of the dependent variable followed by the variable 'Employee involvement' explaining 0.000%, 'Focus on training' explaining 1.1%, 'Participative decision making'explaining 0.6%, and 'Interpersonal Relationship'explaining 0.6%, of variance in dimensions of total quality management

Results of Multiple Regression Analysis Relating to Age and Dimensions of Total Quality Management:

Coefficients[a]		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	2.704	0.54		5.008	0
	Awareness of TQM	0.387	0.176	0.334	2.191	0.032
	Employee involvement	-0.239	0.219	-0.19	-1.093	0.278
	Focus on training	-0.176	0.314	-0.116	-0.562	0.576
	Participative decision making	-0.631	0.28	-0.422	-2.252	0.027
	Interpersonal Relationship	0.71	0.268	0.489	2.654	0.01
R Square		0.168				
Adjusted R ^{2}		0.112				
F Value		2.992				
Sig at 5% level		0.016				

Interpretation:

The factors 'Employee involvement, and Focus on training' was found to be insignificant in explaining the dependant variable. The result of the regression model has been tested using ANOVA and the F value (2.992) was found to be significant at 5% level of significance. Therefore, the regression model is found to be moderately fit. Further, it can be seen that adjusted R² is equal to 0.112 which means that any time another independent variable is added to this model, the R² would change marginally only. Hence the factors Awareness of TQM, Participative decision making, and Interpersonal Relationship is rejected explaining there is significant impact by age on dimensions of total quality management.

Findings:

Employee:
- ✓ Most of the respondents are male and most of the respondents belongs to the age group of 26-35 years.
- ✓ Maximum of the respondents have completed their UG in the survey and they are having 7-9 members in their family.
- ✓ Most of the respondents are earning from 6001-8000 in our survey.
- ✓ Maximum of the respondents are having experience from 1-3 years in our survey.
- ✓ Most of the respondents are highly satisfied on the monetary rewards given.
- ✓ Maximum of the respondents said that they give quality rewards to employees.

Top Level Management:
- ✓ Maximum of the respondents are from the age group of 26-35 and they have completed UG.
- ✓ Most of the respondents are unmarried and having 7-9 members in their family.

International Journal of Current Research and Modern Education (IJCRME)
Impact Factor: 6.925, ISSN (Online): 2455 - 5428
(www.rdmodernresearch.com) Volume 3, Issue 1, 2018

- ✓ Maximum of the respondents are earning from 6001-8000 in our survey.
- ✓ Most of the respondents are having experience from 3-5 years in our survey.

Suggestions:
- ✓ The top level management can educate about the quality policies of the manufacturing companies so that the employees will be aware about that in future period of time.
- ✓ The employees are in lag of providing suggestions to their co-workers and suggesting their superior for necessary changes in the work related aspects. For this purpose the management can provide training for leadership development and other aspects regarding knowledge transmission which leads to increase in productivity in future period of time.
- ✓ The employees don't have any opinion about the effort taken by the management to encourage team work and it shows that the management is in lag with this activity. For this purpose more effort can be made to increase the quality of service in future period of time.
- ✓ The management should focus more on income level with 8001-10000 as the mean value score by them during the survey was low when compared to other employees.
- ✓ The management should focus more on employee experience from 3-5 years as the mean value score by them during the survey was low when compared to other level of experience.

Conclusion:
The conclusion is that when compared with other dimensions on survey with employees participative decision making has the highest impact with demographic profiles and other factors related to TQM. It shows that this factor can be taken for the decision making process of the study and when compared with other dimensions related with top level management the dimension process centered can be taken for decision making process of the study.

References:

1. Ahmed, S. M., Aoieong, R.T. Tang, S.L. and Zheng, D.X.M. (2005), "A comparism of quality management systems in the construction industries of Hong Kong and the USA" International Journal of Quality & Reliability Management, Vol. 22 No. 2, pp. 149-61
2. Alomain, N., Tunca M.Z. and M. Zairi, (2003), "Customer satisfaction @ virtual organizations", Management Decision, Vol. 41 Iss: 7 pp 666- 670.
3. Atkinson, R. (1999), "Project management: cost, time and quality, two best quesses and a phenomenon, it`s time to accept other success criteria", International Journal of Project Management, Vol. 17 No. 6, pp. 337-43.
4. Barad, M. and T. Raz, (2000), "Contribution of quality management tools and practices to project management performance", International Journal of Quality & Reliability Management, Vol. 17 Iss: 4 pp. 571-483
5. Bennett, R. and S. Rundle-Thiele, (2004), "Customer satisfaction should not be the only goal", Journal of Services Marketing, Vol. 18 Iss: 7 pp. 514 - 523
6. Brown, M. G. (1993), " Why does total quality fail in two out of three tries?", Journal for Quality and Participation, Vol 16 No. 2 pp 80-9.
7. Bryde, D. J and L. Robinson, (2007), "The relationship between total quality management and the focus of project management practices", The TAM Magazine, Vol. 19 No.1, pp 50-61
8. Bryde, D.J. (2003), "Modelling project management performance", International Journal of Quality & Reliability Management, Vol. 20 No. 2, pp. 229-54
9. BSI (British Standards Institution) (2000), BS EN ISO 9000:2000 Quality Management Systems – Fundamentals and Vocabulary, British Standard Institute, London
10. Campbell, L. and E. Finch, (2004), "Customer satisfaction and organizational justice", Facilities, Vol. 22 Iss: 7 pp. 178 – 189.
11. K. Veerakumar (2016) article titled "A Research on Quality Factors Influencing Online Shopping" International Journal of Engineering Research and Modern Education, Vol-I, Issue-II, July – 2016. P.No.1-5.