ASSESSING EMPLOYEES' PARTICIPATION IN TQM PRACTICES IN PRIVATE UNIVERSITIES AROUND CHANDIGARH: AN EMPIRICAL STUDY

ANUPREET KAUR¹, DR. YASH PAL TANEJA² & DR. MADHURI GUPTA³

¹Research Scholar, Ik Gujral Panjab Technical University, Kapurthala, India

²Assistant Professor, Ggdsd College, Chandigarh, India

³Associate Professor, Rayat Institute of Management, Ropar, India

ABSTRACT

The following paper is aimed at finding out the perception of faculty members regarding employees' participation in TQM implementation in the Universities under study. For the purpose of the study, the sample size of 180 faculty members of 6 private Universities around Chandigarh was taken. Structured Questionnaires were used for the collection of data. Frequency Analysis, Mean, Anova and Tukey Post Hoc Test were used for analysis and interpretation of data. An attempt has been made to highlight the importance of employees' participation in the working of an organization. The paper also recommends the adoption of "employees' participation" approach in implementing TQM practices in the Universities.

KEY WORDS: Perception, Total Quality Management, Employees' Participation, Top Management

Received: Jun 08, 2020; **Accepted:** Jun 28, 2020; **Published:** Sep 15, 2020; **Paper Id.:** IJMPERDJUN20201251

INTRODUCTION

Total quality management (TQM) is a management philosophy for improving the quality of the products/services/processes continuously. TQM focuses on the customers' needs and expectations in order to improve customer satisfaction and firm's performance. TQM practices consists of various elements which have an impact on the performance of an organization. According to **Ishikawa (1985)**, TQM is defined as an activity where everyone studies, practices and actively participates in quality control within an organization. So, the quality of work of all the employees along with their participation in TQM practices is essential for the successful implementation of TQM practices in an organization.

LITERATURE REVIEW

Sadikoglu and Olcay (2014) aimed to find the impact of TQM practices on the performance of various firms, to investigate the reasons and difficulties in implementing TQM practices by the firms in Turkey and to investigate the relationship between TQM practices and firms' performances. For the purpose of the study, a sample of 500 firms of Turkey was taken. Exploratory factor analysis (EFA) and reliability analysis, Descriptive Statistics and Correlations were used for data analysis. The results of the study revealed that TQM index has positive relation with all the performance measures. TQM practices lead to improvement in various performance measures in the firms. The study also stated that the firms must improve employees' skill and ensure employees' participation along with improving firms' structure and allocating sufficient resources for the successful implementation of TQM.

Ibrahim (2013) analyzed and compared some of the researchers' approaches regarding Total Quality

Management aims, applications, models and principles. Extensive literature survey was used for the purpose of the study. According to the author, the researchers insist that top management should be involved in the application of quality in order to achieve excellence and all employees should participate in the quality improvement process. The researchers also highlighted that evaluation is very important to achieve continuous improvement in the organization.

Coyle-Shapiro (1999) undertook the study on a manufacturing unit in UK to examine the process of change involved in implementing TQM and to find out the impact of employees' participation in TQM on the commitment of employees towards the organization. The findings of the study revealed that supervisory participative style has a positive relation with employees' participation. The level of employees' participation has a positive relation with the assessment of the benefits of TQM. It was further revealed that employees' participation in TQM is not positively related to organizational commitment.

Lawler (1994) stated that employees' involvement in quality management practices is one of the most important principles of TQM. Extensive literature survey was used for the purpose of the study. According to the author, employees' involvement is very important for the successful implementation of TQM practices in the organization. TQM practices are implemented in a better way with the support of employee involvement programs. Many TQM programs fail in the organization due to lack of effective employee involvement programs. Employees' participation affects organizational performance also.

Wilkinson et al. (1992), outlined the elementary principles of TQM and examined its effect on employee involvement. Case study method was used for the purpose of the study. The researcher studied TQM practices followed by three companies belonging to marketing communication, engineering and the financial sector. The researchers revealed that the companies adopted TQM with consultants and expensive packages, educational programmes communicating missions and values and the establishment of quality teams and a review committee (comprising senior management). The researchers also highlighted that the employees were more enthusiastic in performing their tasks and duties which had an influence on their job and environment of the companies.

The Need of the Study

Employees are a valuable asset to any organization. The successful functioning of an organization depends upon the sincerity and commitment of its employees towards the organization. The employees are more committed to the organization if they are made to feel a part and parcel of the organization. The employees' participation or empowerment in the organization helps to secure loyalty and commitment towards the organization. This study is conducted with a view to highlight the fact that for the successful implementation of TQM practices in educational institutions, employees' participation is essential. Non-involvement of employees in TQM practices can hinder the TQM implementation process.

Objectives of the Study

- To find out the perception of the faculty members regarding their active involvement in quality related activities.
- To find out the perception of the faculty members whether they are encouraged to give their suggestions which are further implemented.
- To find out the perception of the faculty members whether Universities encourage reporting work related problems.

- To find out the perception of the faculty members whether they are encouraged to rectify problems they find in the Universities.
- To make comparison on the basis of employees' participation in TQM implementation in the Universities under study.

RESEARCH METHODOLOGY

For this research, the following methodology is used.

Research Design: Descriptive research methodology was employed.

Research Instrument: A structured questionnaire based on a five point Likert Rating Scale was used for the collection of data. The dimensions of the scale were: Strongly Disagree =1; Disagree =2; Neutral = 3; Agree = 4 and Strongly Agree = 5.

Sampling Design

Scope: -The sample was chosen from the faculty members of six private Universities around "Chandigarh", namely Baddi University, Chitkrara University, Chandigarh University, IEC University, Maharaja Agrasen University and RIMT University.

Sampling Technique: Stratified sampling technique was adopted. In stratified sampling, the total population is divided into smaller groups or strata, based on some common characteristics in the population data. Then, the researcher randomly selects the sample proportionally. For the purpose of the study, the respondents were taken from the different departments of the Universities.

Sample Size: Total sample size of 180 respondents (30 from each University) was taken for the purpose of the study.

Tools for Analysis of Data: The tools used for the study were frequency analysis, mean and Anova and Post Hoc Test

Analysis and Interpretation of Data

The research paper analysis, the perception of the faculty members regarding employees' participation in TQM implementation in private Universities around Chandigarh. The employees' participation as a variable of TQM was measured through the following aspects.

Frequency Analysis

In this section, frequency analysis is done with the help of tables showing the dimensions of the scale along with the frequency (the number of faculty members) and the percentage of faculty members responding to the corresponding dimensions of the scale for each statement.

Employees' Participation

Table 1: There is Active Involvement of the Employees in Quality Related Activities. (EP1)

	Frequency	Percent
Strongly Disagree	6	3.3
Disagree	13	7.2
Neutral	49	27.2
Agree	88	48.9
Strongly Agree	24	13.3
Total	180	100.0

Table 1 indicates that 6 respondents (3.3%) strongly disagree and 13 respondents (7.2%) disagree that there is active involvement of the employees in quality related activities in their University. 49 respondents (27.2%) have neutral response. 88 respondents (48.9%) agree and 24 respondents (13.3%) strongly agree that there is active involvement of the employees in quality related activities in their University.

Table 2: The Employees are Encouraged to Give their Suggestions and they are Further Implemented. (EP2)

	Frequency	Percent
Strongly Disagree	4	2.2
Disagree	15	8.3
Neutral	50	27.8
Agree	84	46.7
Strongly Agree	27	15.0
Total	180	100.0

Table 2 indicates that 4 respondents (2.2%) strongly disagree and 15 respondents (8.3%) disagree that the employees are encouraged to give their suggestions and they are further implemented in their University. 50 respondents (27.8%) have neutral response. 84 respondents (46.7%) agree and 27 respondents (15%) strongly agree that the employees are encouraged to give their suggestions and they are further implemented in their University.

Table 3: Reporting Work Related Problems is Encouraged by the University. (EP3)

	Frequency	Percent
Strongly Disagree	1	.6
Disagree	14	7.8
Neutral	59	32.8
Agree	76	42.2
Strongly Agree	30	16.7
Total	180	100.0

Table 3 indicates that 1 respondent (.6%) strongly disagree and 14 respondents (7.8%) disagree that reporting work related problems is encouraged in their University. 59 respondents (32.8%) have neutral response. 76 respondents (42.2%) agree and 30 respondents (16.7%) strongly agree that reporting work related problems is encouraged in their University.

Table 4: Employees are Encouraged to Rectify Problems they find (EP4)

	Frequency	Percent
Strongly Disagree	2	1.1
Disagree	25	13.9
Neutral	46	25.6
Agree	77	42.8
Strongly Agree	30	16.7
Total	180	100.0

Table 4 indicates that 2 respondents (1.1%) strongly disagree and 25 respondents (13.9%) disagree that employees are encouraged to rectify problems they find in their University. 46 respondents (25.6%) have neutral response. 77 respondents (42.8%) agree and 30 respondents (16.7%) strongly agree that employees are encouraged to rectify problems they find.

Descriptive Analysis

This section presents a descriptive analysis of employees' participation in TQM implementation in the Universities under study. A five point Likert Rating Scale has been used in the study to gauge the responses of the respondents. The mean score closer to 5 represents the degree to which respondents perceive that the particular aspect of employees' participation dominantly prevails in the University. Whereas mean score nearing 1 represent perception that the particular aspect of employees' participation has a lower prevalence.

Table 5: Perception of Faculty Members Regarding Employees' Participation In The Universities

Sr No.	Statement	N	Mean	Sd
EP1.	There is active involvement of employees in quality related activities.	180	3.62	.923
EP2.	The employees are encouraged to give their suggestions and they are further implemented.	180	3.64	.914
EP3.	Reporting work related problems is encouraged by the University.	180	3.67	.865
EP4.	Employees are encouraged to rectify problems they find.	180	3.60	.961
	Employees' Participation	180	3.63	.722

Table 5 indicates the means and standard deviations of the different aspects of Employees' Participation. The mean score of the overall employees' participation aspect of the respondents of six Universities is 3.63 and Standard deviation is .722. The mean scores of different aspects of Employee Participation as (EPI, EP2, EP3 and EP4) for the total sample (N= 180) in descending order are given as follows: The highest of all the mean scores (mean = 3.67, SD = .865) have been reported for **EP3** i.e. Reporting work related problems is encouraged by the University. It has been followed by **EP2** i.e. The employees are encouraged to give their suggestions and they are further implemented (mean = 3.64, SD = .914), **EP1** i.e. There is active involvement of employees in quality related activities (mean = 3.62, SD = .923) and **EP4** i.e. Employees are encouraged to rectify problems they find (mean = 3.60, SD = .961). The values of standard deviation range between .865 to .961. The highest variation in responses have been found for **EP4** i.e. Employees are encouraged to rectify problems they find. (mean = 3.60, SD = .961) . However, the lowest variation in responses have been found for **EP3** i.e. Reporting work related problems is encouraged by the University (mean = 3.67, SD = .865).

Inferential Analysis

In inferential analysis, data is taken from a sample and then inferences are made about the larger population from the drawn sample. In this section, for the purpose of inferential analysis, analysis of variance (ANOVA), t-test and Tukey Post Hoc test have been used in the study.

H1: There is a significant difference in the perception of faculty members regarding employees' participation in TQM practices between the Universities.

Mean score and standard deviation of employees' participation aspect of TQM practices have been calculated and presented in the table below:

Table 6: Comparison in the Perception of Faculty Members Regarding Employees' Participation in TQM Practices Between the Universities

Variables/ Universities	Baddi Univ. N = 30	Chitkara Univ. N = 30	Chd Univ. N = 30	Iec Univ. N = 30	M. A Univ. N = 30	Rimt Univ. N = 30	Total N = 180
Employee Participation							
Mean	3.24	3.83	3.74	3.49	3.80	3.68	3.63
SD	.877	.674	.803	.438	.821	.474	.722

The overall mean score for Employees' Participation in TQM Practices is 3.63 and SD = .722. The highest mean score has been reported for Chitkara University (mean = 3.83, SD = .674), followed by the mean score of Maharaja Aggarwal University (mean = 3.80, SD = .821), Chandigarh University (mean = 3.74, SD = .803), RIMT University (mean = 3.68, SD = .474), IEC University (mean = 3.49, SD = .438). The lowest mean score has been reported for Baddi University (mean = 3.24, SD = .877). The values of SD range between .438 to .877. The highest variation in responses for Employees' Participation in TQM Practices has been found in Baddi University (mean = 3.24, SD = .877). The lowest variation in responses for Employees' Participation in TQM Practices has been found IEC University (mean = 3.49, SD = .438).

The results show that the faculty members of Chitkara University perceive the most for Employees' Participation in TQM Practices in the University. Whereas, the faculty members of Baddi University perceive the least for Employees' Participation in TQM Practices in the University. Since in my questionnaire, 4 corresponds to agreement with the statement and the mean score of perception of faculty members regarding employees' participation in TQM practices is less than 4, so we can say that there is a need for improvement in employees' participation in TQM practices in the Universities.

One way ANOVA has been conducted to test the hypothesis H1 concerning significant difference in the perception of faculty members towards the employees' participation aspect of TQM practices between the Universities.

Table 6 (i): ANOVA – Comparison in the Perception of Faculty Members Regarding the Employees' Participation in TQM Practices between the Universities.

Variables	Sum of Squares	df	Mean Square	F	Sig.	Significant / Non- Significant
Employees' Participation						
Between Groups	7.640	5	1.528	3.099	.010	Significant
Within Groups	85.792	174	.493			
Total	93.432	179				

From the table 6 (i), the results of ANOVA are observed to be statistically significant (p values < 0.05) for employees' participation in TQM practices between the Universities. Hence, the hypothesis (H1) for significant difference in the perception of faculty members regarding employees' participation in TQM practices between the Universities has been accepted.

Post Hoc Test

As the table 6 (i) shows that there is a significant difference in the perception of the faculty members regarding employees' participation in TQM practices between the Universities where P-Value is less than 0.05, so, **Tukey HSD post hoc test**, especially preferred for multiple comparisons between six or more samples was applied further to find out which of the Universities significantly differ in the perception of the faculty members regarding employees' participation in TQM practices. Details of multiple comparisons through the Tukey HSD post-hoc test for the perception of the faculty members regarding employees' participation in TQM practices between the Universities are presented in the table 7.

Table 7: Multiple Comparisons through Tukey HSD for the Perception of Faculty Members Regarding Employees' Participation in TQM Practices between the Universities.

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
EMPLOYEES' PARTICIPATION	Baddi University	Chitkara University	-.592*	.181	.016	-1.11	-.07
		Chandigarh University	-.500	.181	.069	-1.02	.02
		IEC University	-.250	.181	.740	-.77	.27
		Maharaj Agarsen University	-.558*	.181	.029	-1.08	-.04
		RIMT University	-.433	.181	.165	-.96	.09
	Chitkara University	Baddi University	.592*	.181	.016	.07	1.11
		Chandigarh University	.092	.181	.996	-.43	.61
		IEC University	.342	.181	.415	-.18	.86
		Maharaj Agarsen University	.033	.181	1.000	-.49	.56
		RIMT University	.158	.181	.952	-.36	.68
	Chandigarh University	Baddi University	.500	.181	.069	-.02	1.02
		Chitkara University	-.092	.181	.996	-.61	.43
		IEC University	.250	.181	.740	-.27	.77
		Maharaj Agarsen University	-.058	.181	1.000	-.58	.46
		RIMT University	.067	.181	.999	-.46	.59
	IEC University	Baddi University	.250	.181	.740	-.27	.77
		Chitkara University	-.342	.181	.415	-.86	.18
		Chandigarh University	-.250	.181	.740	-.77	.27
		Maharaj Agarsen University	-.308	.181	.533	-.83	.21
		RIMT University	-.183	.181	.914	-.71	.34
	Maharaja Agarsen University	Baddi University	.558*	.181	.029	.04	1.08
		Chitkara University	-.033	.181	1.000	-.56	.49
		Chandigarh University	.058	.181	1.000	-.46	.58
		IEC University	.308	.181	.533	-.21	.83
		RIMT University	.125	.181	.983	-.40	.65

	RIMT University	Baddi University	.433	.181	.165	-.09	.96
		Chitkara University	-.158	.181	.952	-.68	.36
		Chandigarh University	-.067	.181	.999	-.59	.46
		IEC University	.183	.181	.914	-.34	.71
		Maharaj Agarsen University	-.125	.181	.983	-.65	.40

The results of the **Post Hoc test Tukey HSD** for employees' participation revealed that p value between Chitkara University and Baddi University (.016) and MA University and Baddi University (.029) is less than .05. This suggests that the mean value (the perception of faculty members for Employees' Participation) between the Universities significantly differ at 5% level of confidence. The difference of the mean value of Chitkara University and Baddi University (.592) and MA University and Baddi University (.558) suggests that the faculty members of Chitkara University and MA University have higher perception for Employees' Participation in TQM implementation as compared to the faculty members of Baddi University.

Findings and Recommendations

The present study has analyzed the perception of the faculty members of the Universities regarding employees' participation in TQM implementation. Though, a majority of the respondents agree to each aspect of employees' participation (EP1, EP2, EP3 and EP4), but still the mean score of these aspects is less than 4. Since the mean score of the perception of the faculty members is less than 4, so there is a need for top management to increase employees' participation in implementing TQM practices in the Universities. The results reveal that the faculty members of Chitkara University perceive the most for employees' participation in TQM Practices in their University, whereas the faculty members of Baddi University perceive the least for employees' participation in TQM Practices in their University. The top management of the Universities should focus more on active involvement of the employees in quality related activities. The employees should be encouraged to give their suggestions which can be further implemented. Reporting work related problems should be encouraged in the Universities and employees should also be encouraged to rectify the problems, they find in the Universities.

CONCLUSIONS

Participation of the employees is very essential in implementing TQM practices in any organization. The employees' participation in TQM practices leads to effective implementation of TQM practices in an organization. The top management of the Universities must encourage and involve the employees in quality management and improvement activities and their suggestions should be considered in making decisions regarding implementation of TQM practices in the Universities.

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