

Conference paper

The Correlation Between Total Quality Management Practices and Employees' Job Performance: Basis for Proposed Sustainable TQM Strategies

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Abstract.

The main purpose of this research is to investigate the relationship between Total Quality Management (TQM) success factors implementation and the employees' job performance of an oil company located in the province of Batangas, Philippines in order to propose TQM strategies that could further sustain the implementation of the practices. The 100 employees selected through purposive sampling are the participants of the study. The validated questionnaire was administered through electronic data surveying. Data were statistically treated with the techniques used such as measure of central tendency to determine the participants' demographic profile, assessment of the TQM success factors and the effect of TQM to the employees' job performance, and Pearson correlation coefficient to determine the relationship between the implementation of TQM success factors and employee job performance. The results indicated that employees strongly agree that all the eight success factors of TQM are visibly implemented in the company. Among the eight success factors, it is training and development, quality culture and customer focus which garnered the highest ratings. For the effect of TQM in the job performance, it was revealed that the employees consider the TQM implementation with respect to doing their excellent performance in their jobs. Lastly, there is a significant relationship between the implementation of TQM success factors and employee job performance. This findings give an implication that oil companies may consider the full implementation and decide on proper application of the success factors to their organization as these are significantly affecting the job performance of the employees. Thus, the proposed TQM strategies can be of help in the sustaining the implementation of TQM practices.

Keywords: TQM practices, job performance, oil company

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1. INTRODUCTION

Total quality management (TQM) is a management technique that aims to improve the quality of goods, services, and operations by concentrating on the demands and preferences of customers in order to boost client retention and business performance. In view of this environmental reality, businesses will probably need to continue promoting labor efficiency and effective customer management. Despite the idea of quality having been around for a while, its definition has altered and developed over time. In the early 20th century, quality control meant inspecting goods to make sure they complied with requirements. Quality started to be seen as a concept that not only applied to the production process but also to the entire company (Smith, 2009).

Companies in a number of sectors have significant difficulty in figuring out how to lead, or to survive, in the industry's fast-paced movement in the competitive and advanced global business climate. In order to prevent failures from having negative effects and to ensure better profit at a lower cost, a variety of techniques and measures have been developed to continuously improve the company's current situation. As such, many businesses all around the world have adopted TQM as a strategy for reaching excellence in quality in the new millennium (Sweis et al., 2019). Many companies in different sectors have previously adopted or are implementing TQM in order to improve quality excellence and have its competitive edge in the market. From then on, businesses started looking for more sustainable and efficient ways to achieve higher quality in line with better performance, which in many respects seemed to be linked to total quality management.

TQM has been acknowledged as a successful management philosophy in the manufacturing and services industries that leads to organizational success. Nonetheless, many companies have used TQM as a technique and tool to enhance quality corporate performance, particularly in the oil industry (Mokbel, 2018). Quality has emerged as one of the most crucial competitive strategy elements in this industry as this also brings customer satisfaction which is imperative to any industry. The secret to customer satisfaction is to create excellent goods and services that promote long-term success for the company.

This study is based on the TQM success factors framework which was obtained from among the comparisons of the many reviewed literatures conducted by Aletaiby et.al (2017) which specifically focused on the numerous success factors of TQM as proposed by different research authors. Among the eight (8) success factors identified are top management commitment, customer focus, quality culture, continuous improvement,

training and development, employee empowerment, process management, and communication. It further revealed the importance of adopting TQM and its benefits and impacts on employee performance in Iraqi oil and gas industry. These factors served as the conceptual framework of this current study which was statistically treated for its relationship to employees' job performance in one of the oil companies located in Batangas, Philippines.

The researchers as Business Professors need to know how total quality management impacts the oil industry in the Philippines. Although there are a several studies which tell that TQM is being practiced in most industries, there have been very limited studies that present TQM indeed impacts the job performance of employees most especially in the oil industry which happen to be one of the prominent businesses in the country. However, it is observed as well that in the recent years, the oil companies have been shutting down its operations not only for economic reasons but could be associated with how these companies manage the business and how they compete in the market as well.

In a study conducted by Mendoza (2016), it revealed that the firms' internal process optimization is the main emphasis of continuous improvement methodology. Companies as a whole must work to continuously improve their procedures and methods by taking into account the knowledge, abilities, and experiences of the workers. Thus, this study could benefit the oil companies in successfully managing and operating their business through the proper implementation of TQM in relation to the job performance that employees could render with excellence.

Based on the findings of the study, the researchers intend to propose sustainable TQM strategies peculiar to the needs of the employees which could be directly aligned with the identified success factors to strengthen the company operations. Specifically, this research paper aims to:

1. Analyze the profile of the respondents.
2. Assess the implementation of TQM practices based on the eight success factors.
3. Determine the extent to which the TQM success factors affect the employees' job performance.
4. Correlate the TQM success factors implementation and employees' job performance.
5. Propose a TQM Strategies which could sustain the implementation of the TQM practices.

1.1. Hypothesis

There is no significant relationship between Total Quality Management practices implementation and employees' job performance.

2. METHODOLOGY/ MATERIALS

This study utilized an integration of quantitative research methods, the descriptive-correlational designs, to achieve its specific objectives. The descriptive design was used to describe and summarize the participants' assessment about the eight success factors namely, top management commitment, customer focus, quality culture, continuous improvement, training and development, employee empowerment, process management, and communication and the employees' job performance. The correlational design was used to determine and describe the significance of relationship between TQM practices and job performance.

There were 100 employees from an oil company in the province of Batangas, Philippines selected through the use of random convenience sampling technique who concurred to become participants of the study. The instrument is research-made where a total of 50-items were formulated by the researchers. It has undergone the validation process by several experts in the field of research. The first part constitutes the demographic profile of the respondents, while the second part included the statements that describe each of the success factors of TQM, and lastly, the third part presented the effects of TQM to employees' job performance. The pilot testing was made to initial 30 respondents which internal consistency was marked at 0.917 using Cronbach Alpha which was interpreted with "excellent" reliability. The approved survey questionnaire was administered to the participants with the use of online data surveying. As part of the ethical consideration, the respondents were provided with an informed consent which stated that answering the survey is on a voluntary basis and they have the free to discontinue responding if they feel they are no longer comfortable with it.

The study lends itself to some limitations. The target respondents were only limited to one large oil company which was chosen by the researchers. Although there are various oil companies in the province of Batangas, Philippines, their proximity is a challenge. Inasmuch as the researchers would want to conduct face to face and physical administration of the survey, the difficulty that the pressing situation of COVID pandemic still prevented the researchers from doing it. Hence, this study is limited to online interaction with the participants. The gathering of electronic data which came from

those respondents who willingly answered the questionnaire became the basis of the results. Finally, as soon as the data were collected in underwent tallying, tabulation and analysis using frequency, percentage, and weighted mean. Further, Pearson Correlation Coefficient was used to test the significant relationship between the TQM success factors and employees' job performance.

3. RESULTS AND DISCUSSIONS

This part of the paper presents, analyzes, and interprets the data gathered from the survey conducted by the researchers. Tables are used in order to illustrate clearly the findings of the study and data were presented according to the objectives of the study.

3.1. PROFILE OF THE PARTICIPANTS

This section presents the profile of the respondents in terms of age, sex and length of service employment. As reflected in the table, it could be gleaned that majority of the respondents are in the 31-40 years old age bracket getting a highest percentage of 41%. It further revealed that most of them are males with gained percentage of 74% and mostly having employment service for 11-15 years earning a percentage of 31%.

TABLE 1: Profile of the Respondents.

Age	Frequency	Percentage
21-30 years old	29	29
31-40 years old	41	41
41-50 years old	28	28
51 and above	2	2
Total	100	100
Sex	Frequency	Percentage
Male	74	74
Female	26	26
Total	100	100.0
Length of Service Employment	Frequency	Percentage
Less than 1 year	5	5
1 to 5 years	24	24
6 to 10 years	22	22
11 to 15 years	32	32
16 to 20 years	15	15
21 and above	2	2
Total	100	100

Data revealed that the employees in the company are in their middle ages and are strong and vigorous to perform their tasks and responsibilities considering that this is an oil company. Moreover, the results show that male dominated the oil company and that they are the gender commonly employed in this type of industry. An article of Forbes (2019) cited that even women occupies nearly half of the workforce, they make up only 15% in the oil and gas industry. This can be associated with the masculine type of work which requires one to have robust and strong resistances at work. Lastly, it can be inferred that employees are relatively staying long enough in the company as majority of them are over 6 years and above service of employment. Specifically most of them are engaged with the company for more than 11 years now. Employees from this industry tend to stay with several reasons. As mentioned by Higginbotham (2022), one of the many reasons when it comes to jobs in oil industry is that there are many different career paths to choose from, and it is all about having work environment that encourages employees to develop their skills and to develop themselves to a higher level in career ladder (Alkady, 2022).

3.2. TOTAL QUALITY MANAGEMENT FACTORS

Table 2 presents the assessment of the success factors in Total Quality Management. It can be viewed from the results that all of the eight success factors of TQM were assessed as implemented in the company to which the respondents strongly agree. It further revealed that among the success factors, it is training and development which gained the highest composite mean of 3.72 (SD=0.44). It was followed by the quality culture which garnered a composite mean of 3.68 (SD=0.46). Getting the third highest composite mean of 3.61 (SD=0.58) is the customer focus.

This implies that the company was seen to have been implementing the success factors of total quality management as assessed by their employees. It has been highly regarded by their employees that TQM is truly observed as reflected in the high composite means and gravity of its verbal interpretation. It is good for this oil company to utilize the factors that may lead them to a more successful integration of best quality practices that could help the organization to thrive and flourish. It revealed that this oil company significantly implements training and development programs which could help the employees further develop and hone their hard and soft skills. For an individual employee or group of employees, training and development can be started for a plenty of reasons, however, performance improvement may be the best indicator of the accurate implementation of training and development which could be reflected through

TABLE 2: Assessment of the Total Quality Management Success Factors.

Indicators	Composite Mean	Standard Deviation	Verbal Interpretation
Customer Focus	3.61	0.58	Strongly Agree
Continuous Improvement	3.53	0.50	Strongly Agree
Training and Development	3.72	0.44	Strongly Agree
Quality Culture	3.68	0.46	Strongly Agree
Process Management	3.53	0.49	Strongly Agree
Communication	3.59	0.48	Strongly Agree
Empowerment and Involvement	3.59	0.50	Strongly Agree
Top Management Commitment	3.56	0.50	Strongly Agree

Legend: 3.5 to 4.0 – Strongly Agree

a performance appraisal system (McNamara, 2022) and outstanding performance in the long term could provide employees promotion which could boost the morale of employees, which consequently increases their productivity and results to improved overall organizational performance (Belyh, 2020). On the other hand, quality culture also improves employee job performance and organizational productivity. A quality culture could help the organization retain its best employees with loyalty and commitment, regardless of their job, their performance can be further enhanced because of the emphasized teamwork, security and respect of individual employees (Iqbal, et. al, 2017). If an employee’s personal and professional dispositions are aligned with that of the company’s culture, it can be a basis for them to perform job with excellence. Culture is said to be crucial as it affects the decisions of employees whether to still embrace their jobs and stay in the organization (Ibrahim, et.al, 2018). Lastly, employees assessed that customer focus is highly given attention in the company. The importance of having satisfied customers, whether internal or external is vital for any company. Happy and contented employees are tantamount to a well taken cared internal customer who could provide excellent service to external customers. Businesses such as oil companies need to pay high attention to providing outstanding customer focus as their existence are based upon customer satisfaction. Poor quality service delivery could lead to loss of customers and business opportunities (Mohammed & Saturday, 2019 p.807).

3.3. EMPLOYEES' JOB PERFORMANCE

The table 3 presents the possible effects of TQM to employees’ job performance. As can be observed from the table, all the indicators garnered high means and effects

are perceived to a very great extent. The statement “I respect and enjoy the work I do because of the mentoring and guidance I receive from my superiors” received the highest mean of 3.81 (SD=0.39) equivalent to very great extent. Next to it are the statements “I am motivated to work by happy clients” and “I am generally motivated to do my job well due to management commitment” with a mean of 3.76 (SD=0.34; 0.43) equivalent to very great extent, while the statement “My output’s quality and quantity are influenced by a positive work environment” followed with mean equivalent to 3.74, verbally interpreted as very great extent.

TABLE 3: Effect of TQM to Employees’ Job Performance.

Indicators	Mean	Standard Deviation	Verbal Interpretation
I am motivated to work by happy clients	3.76	0.43	VGE
I can only perform to the best of my abilities and capabilities with constant progress.	3.69	0.46	VGE
I am determined to develop and hone my skill set because of the training and development activities that have been provided to me.	3.69	0.49	VGE
I am affected by how I set and pursue my own personal goals and aspirations considering company’s basic principles.	3.72	0.45	VGE
I perform properly at work because TQM implementation generally helps me.	3.69	0.49	VGE
I maintain my enthusiasm at work by putting numerous strategies into practice.	3.59	0.52	VGE
My output’s quality and quantity are influenced by a positive work environment.	3.74	0.44	VGE
It gives me the confidence to perform work that has been properly delegated and trusted.	3.62	0.49	VGE
I respect and enjoy the work I do because of the mentoring and guidance I receive from my superiors.	3.81	0.39	VGE
I am generally motivated to do my job well due to management commitment.	3.76	0.43	VGE
Composite Mean	3.71		VGE
Cumulative Standard Deviation		0.46	

Legend: 3.5 to 4.0 – Very Great Extent

It could be inferred from the results that TQM implementation has effects on the performance of employees to their respective jobs. Employees are engaged to do their

job responsibilities for and in consideration with the practices of TQM of the company which goes to show that TQM is an integrated organizational effort designed to improve performance quality level (Mohammed & Saturday). Furthermore, oil industries have now realized the importance of quality to compete and survive in unpredictable market arena (Srinivasaiah et.al, 2020), and that TQM concept is behind many organizations prosperity (Busaidi, 2022). This could be a good wakening call for this industry that TQM has to have full implementation in order for its employees to appreciate more the beauty and the advantages that these practices could provide the organization.

3.4. CORRELATION BETWEEN TQM SUCCESS FACTORS AND EMPLOYEES' JOB PERFORMANCE

Table 4 presents the relationship of TQM success factors and employees' job performance. It could be understood that there are significant relationships between the success factors of TQM and the job performance of the employees. Based on the table, customer focus (p-values=.001), continuous improvement (p-values= .018), training and development (p-values = 001), Quality Culture (p-values = .001), process management (p-values = .001), communication (p-values = .001), empowerment and involvement (p-values = .001), and top management commitment (p-values = .001) are significantly related to employees' job performance. From this point, the null hypothesis is now rejected.

TABLE 4: Relationship of the TQM Success Factors to the Employees' Job Performance.

Total Quality Management Factors	Employees' Job Performance			
	Computed r-value	p-value	Decision on Ho	Verbal Interpretation
Customer Focus	.450**	.001	Reject Ho	Significant
Continuous Improvement	.257*	.018	Reject Ho	Significant
Training and Development	.417**	.001	Reject Ho	Significant
Quality Culture	.539**	.001	Reject Ho	Significant
Process Management	.502**	.001	Reject Ho	Significant
Communication	.490**	.001	Reject Ho	Significant
Empowerment and Involvement	.512**	.001	Reject Ho	Significant
Top Management Commitment	.522**	.001	Reject Ho	Significant

Significant at .05 level of significance

From the results, it could be deduced that the success factors namely customer focus, continuous improvement, training and development, quality culture, process management communication, empowerment and involvement, and top management commitment are significantly affecting the job performance of the employees. The positive implementation of TQM success factors in the company has been observed and appreciated by the employees. These identified factors are the bases at which the employees continuously persevere and perform their jobs well. This in turn can provide the company with high productivity rates. In addition, TQM practices are important to provide customer satisfaction by improved performance and sustained toward the organizational goals (Dedy, 2016). These findings were found to be the same with Elhawi et. al (2021) with all the TQM variables in his study having an impact on employees' performance. Thus, the decision-makers at the organizational levels must have understanding in the importance of applying TQM towards enhancing employees' job performance.

3.5. PROPOSED TOTAL QUALITY MANAGEMENT STRATEGIES

Based on the findings of the study, the researchers find it useful to propose TQM Strategies which could help sustain the good implementation of the success factors in the company.

Training and Development aims to enhance the skills needed to perform the job with excellence. The company may implement the following strategies (1) Provide a comprehensive training and development plan based on the peculiar needs of each position and its intensive implementation, monitoring and evaluation at least once per quarter, (2) Send the employees to take the international certification exams to keep them abreast with the professional/ technical requirements and be highly qualified for the job positions, and (3) Intensive coaching and mentoring the employees who are nearly falling to below expected performance.

Quality Culture aims to build a culture of trust, and employee participation for the achievement of quality goals and objectives. The company may implement the following strategies (1) Conduct orientation and reorientation encouraging employees to adopt a mindset that the company's goals and objectives is to serve people, therefore anything that employees work on will eventually be of benefit to their own family members, and (2) Integration of values that every work shall be pursued with quality instead of compliance. Practice a habit that every submission of work is for the purpose of quality instead of

purpose of compliance. Employees have to understand that quality and compliance with any responsibilities goes hand in hand.

Customer Focus aims to improve customer satisfaction that will enable the company to focus on providing a consistently great customer service experience. The company may implement the following strategies (1) Seek end-user feedback evaluation for all the company partners such as suppliers, clients, among others, (2) Execute an internal satisfaction survey among employees to be able to identify weak points for the purpose of having corrective actions for improvement, and (3) Conduct a research study relevant to the data obtained from the feedback and surveys for the purpose of analytics that could help improve the organization as a whole.

Communication aims to foster smooth and meaningful relationships of employees within and outside the company. The company may implement the following strategies (1) Create a committee that will specifically focus on the projects and programs that will enhance and improve communications within and outside the organization, and (2) Programs such as but not limited to team building activity, short group dynamics within the office, contest, tournaments, events that will encourage sense of camaraderie that will improve individual and group communications.

Empowerment and Involvement aims to foster an environment of confidence and self-determination among employees. The company may implement the following strategies (1) encourage employee participation and engagement in management decisions most especially those organizations which are recognized by the company, and (2) Employee consultations be periodically conducted relevant to management initiatives involving employment relationships.

Top Management Commitment aims to create an atmosphere of inclusivity by having visibility on the part of company administrators. The company may implement the following strategies (1) Hold dialogues which are initiated by management with employee groups, and (2) Yearly R&R activities should be established by management in favor of employees and their families.

Continuous Improvement aims to minimize cost for the company and optimize outputs for the employees. The company may implement the following strategies (1) Regular check and balance activities such as assessments or evaluations of the company processes and procedures, (2) Reviews and revisits of company manual of regulations and processes, and (3) Provide corrective actions for the non-compliance and non-conformances for employees and other stakeholders.

Process Management aims to continuously standardize processes in order to facilitate and manage quality results. The company may implement the following strategies

(1) Implement a Plan-DO-Check-Act framework for all the company processes and procedures, (2) Conduct risk analyses and to mitigate process risks, and (3) Automating processes which are conducted repetitively.

4. CONCLUSION AND RECOMMENDATION

Based on the findings of the study, researchers conclude that the oil company in Batangas, Philippines are dominated by male employees in their middle ages and has been engaged in service for more the six years. The employees strongly agree that all the success factors are being implemented in the oil company. Among the factors, training and development, quality culture and customer focus are assessed with highest ratings which denoted that these three factors are the explicitly being observed and highly noticeable by the employees of the company. The employees' job performances are affected by the success factors of TQM and that these are being considered by the employees whenever they perform their respective tasks and responsibilities. There is a significant relationship between the implementation of the TQM success factors and the employee's job performance which yield the null hypothesis to be rejected and that it is important to consider the full and proper implementation of TQM for oil industry and let these factors be the framework of its processes to increase productivity. The proposed TQM strategies which aims to sustain the worthy implementation of success factors that is beneficial for both the employees and the company be examined, evaluated and be considered by the target oil company.

From the given conclusions that were based from the results of the study, the researchers recommends that the oil companies may consider implementing the proposed TQM strategies for sustainable development and conduct of similar study which will include more participants from greater number of oil companies in the Philippines and/or additional variables which could be used in the study.

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