

Total Quality Management (Tqm) As A Predictor: An Empirical Study Of Tqm And Job Satisfaction Toward School Performance In Pakistan

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Abstract

The aim of this research was to investigate the impact of Total Quality Management (TQM) practices on job satisfaction, specifically examining their influence across high and low performing schools. A sample of 346 teachers from 20 high schools participated in a survey to assess TQM implementation and job satisfaction levels. Utilizing a quantitative approach, data was collected using a questionnaire, and analyzed using SPSS version 25. Descriptive statistics were employed to examine TQM practices and job satisfaction levels, while Pearson's correlation and Multiple Regression were used to explore relationships. Results revealed significant disparities in TQM practices between high and low performing schools, with the latter demonstrating lower levels of both TQM implementation and job satisfaction. Furthermore, the study found a positive correlation between TQM practices and job satisfaction, with TQM predicting a substantial proportion (40%) of job satisfaction variance. Notably, regression analysis identified employee participation, leadership, training and education, and customer focus as key predictors of job satisfaction. These findings contribute to the understanding of effective school management practices, advocating for the adoption of quality management principles to enhance overall school performance and teacher satisfaction.

Keywords: Total Quality Management (TQM), Job satisfaction, Schools Performance.

INTRODUCTION

Education is one of the most important factors in strengthening the social and economic status of the nation and empowering the generation with skills and knowledge. Education is also vital for the well-being of the individual. Education plays a major role in the development of nations as a result of the emergence of global competition in education and technology in the 21st century (Mahmood et al., 2024). The development of any nation depends on the quality of education and therefore the quality of education is of great

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concern to the world Akareem & Hossain, 2016; Masino, 2016). In addition, the quality of education is one of the biggest challenges in the global age of globalization that has created many of the problems that institutions face. School educational institutions therefore strive to address these challenges and need to find an effective and constructive approach to developing their comprehensive quality management system (Ahmad, Altaf, Mahmood, & Muzammal, 2022). There are many gaps in quality management literature and major challenges in recognizing different quality perceptions in developing countries (Ullah, Arshad, Akram, & Mahmood, 2023). Therefore, overall quality management is one of the tools that can be used to improve the quality of education. Quality means brightness and / or compliance with certain standards. Quality shows the difference with special marks that mark the difference and on top of their type (Mahmood, 2020).

Total Quality Management (TQM) is one of the tools that improve the quality of education (Mahmood, Pervez, Ismail, & Kanwal, 2023). The concept of TQM was first introduced by Professor Edward Deming as the father of TQM and Mahmood (2020) described as “TQM is a tool that enhances the quality of education by meeting customer needs and expectations by continually improving teacher quality, teaching methods and general management”. Total Quality Management (TQM) is an attitude of mind as well as a technique of supporting continuous improvement (Sallis, 1996). TQM in education is a philosophy which insists on the betterment, enhancement, improvement and change, of all the services provided to the students (Zabadi, 2013). According to (Mahmood et al., 2024), the school reform and student achievement must be evaluated by determining the relationships and interdependencies that affect the performance of systems, processes, and people functioning within a school. There are plenty of variables that has an impact on educational processes and student achievement where job satisfaction could also be the one variable such as , salary & incentives, teachers security, teaching working conditions and promotion and above all, the lack of implementation of TQM is yet another issue that effects the schools either positively or negatively (Mahmood, Pervez, et al., 2023).

LITERATURE REVIEW

Although TQM has deep roots in the business world, it also has a significant influence on education. The Total Quality Management (TQM) programme is a systematic, all-inclusive approach to continual improvement. TQM may be characterised as a management philosophy that emphasises the management of the entire company. Total refers to as a whole, Quality refers to the degree of perfection/ conformance or compliance to the need and Management refers to the process of planning, organising, leading (directing), controlling or regulating educational resources in order to achieve educational goals through assurance (TQM) that everything goes according to plan (Mahmood, 2020a). TQM in education entails top management commitment, continuous improvement, employee participation, customer focus, and education and training (Mahmood, Akram, Ismail, & Zalli, 2023).

The “Annual Status of Education Report”, ASER (2010) shows that the performance of the students is quite below average in a survey of primary school (Amjad, 2012). The teachers were liable to the lower performance of students with the Government inability to not effectively sponsor education and motivate principal and teachers to enhance their productivity (Adu, Olatundun, & Adu, 2016). In contrast, the TQM does not support the “institutionalized model” and viewing schools as systems. Different researchers defined the system as “business and human endeavours are systems” (Arnold & Wade, 2015). Moreover, Deming (2000), defined it as “a system is a network of interdependent components that work together to accomplish the aim of the system”.

According to Costin (1999), education because the system during which inputs students, teachers, classrooms, educational materials through the mediation of critical processes of learning and teaching become outcomes of students with specific skills, measurable knowledge, etc. and more broadly defined outcomes an educated, productive and workforce.

In addition, job satisfaction describes the employee's satisfaction and motivation in the workplace. Job satisfaction refers or states to the attitude of employees towards their jobs and towards their organization which hires them (Mahmood, Kanwal, & Pervez, 2023). Regarding achieving corporate goals, it alludes to workers' contributions and acknowledgment (Guimaraes, 1996). Employee work satisfaction will thus increase as a result of a focus on TQM procedures. Job satisfaction is considered as one of the key decisive elements of firms' success and growth and development (Hallowell, 1996). Job satisfaction is beneficial for the employee as well as it plays a significant role in the success of an organization (Mahmood & Ismail, 2018). Job satisfaction is defined as an individual's attitude to their occupations and hence the source of satisfaction that stems from internal and extrinsic elements related to the work contents. Scientific researchers would wish to better describe work satisfactions within the educational system to support Herzberg's dual hypothesis, the hygiene and motivational elements (Mohammad Mosadegh Rad & Hossein Yarmohammadian, 2006; Mahmood et al., 2020; Ssesanga & Garrett, 2005).

TQM and work satisfaction have attracted widespread attention in recent years and have been embraced in many educational institutions, notably in industrialised nations. However, research on the successful implementation of TQM and work satisfaction is sparse in poor countries. In Pakistan, for example, the use of overall quality management systems at education began in higher institutions. Implementing job satisfaction measures in pre-university education levels like primary and secondary schools is a recent development in Pakistan. These systems aim to implement continuous improvement strategies for all school aspects and processes, ultimately aiming to enhance overall performance (Mahmood, 2020).

To fulfil the standard of the SDGs 2020, education quality is the most essential concern in the world today, ranking fourth among the SDGs. To meet the quality standards, a genuine method for improving educational quality should be in existence. "Total Quality Management (TQM)" is a strategy used to improve academic performance that is frequently connected to teacher job satisfaction and academic accomplishment in schools. This raises the issue of whether TQM and job satisfaction initiatives are imposed by government schools in Pakistan, and if so, to what extent?

THE STUDY

In general, this study intends to assess the degree of "TQM practises" in schools and to establish best practises for TQM in schools, as well as to identify the organisational and governing structures of educational institutions as identifying aspects of TQM that contribute to work satisfaction. The study's aims are more specifically:

1. To assess the degree of "TQM practises" in two categories schools HP and LP".
2. To investigate the level of "Job Satisfaction" in two categories schools HP and LP".
3. To investigate the relationship between TQM and job satisfaction.
4. To determine the dimensions of TQM can be a predictor to job satisfaction.

METHODOLOGY

The research design entails the methods and procedures to gather and analyze data (Creswell, 2014). This study could be a quantitative method approach was employed. The data was collected and analysed by using SPSS version 24.

A total of 346 instructors from 20 schools were chosen at random to participate in this study. "Krejcie and Morgan (1970) determination of sample size" was used to justify the sample size. "According to Creswell" (2014), the "study of the population" refers to the whole group included in the study. The samples, on the other hand, are the representative elements of the population (Salant & Dillman, 1994). The study was done on two types of secondary schools, namely "High Performance Schools (HPS)" and "Low Performance Schools (LPS)" in the town of Bahawalpur, Pakistan.

Data was collected using a survey instrument comprising three sections. Part A covered respondents' demographic details, while Part B assessed the extent of TQM implementation through 27 items. Part C focused on work satisfaction with 20 items. The TQM questionnaire encompassed five primary constructs: executive commitment, continuous enhancement, customer orientation, staff involvement, and training and development, as proposed by Mahmood (2020). Reliability and validity of the questionnaire were assessed by Mahmood (2020) using exploratory factor analysis and Cronbach's Alpha.

Information was collected through a survey instrument divided into three sections. Section A pertains to respondents' demographics, while Section B assesses the extent of TQM practices with 27 items. Section C focuses on work satisfaction with 20 items. The TQM practices questionnaire consists of five primary constructs: top management commitment, continual improvement, customer focus, employee participation, and training and education, developed by Mahmood (2020). Mahmood (2020) assessed the reliability and validity through exploratory factor analysis and Cronbach's Alpha.

The Likert scale comprises 20 items divided into four scales: compensation and incentive (5 items), working conditions (5 items), security (5 items), and Growth & Promotion (5 items). As a result, the 7-point scale and instrument reliability as tested by Lester (1982) and Mahmood (2020) through construct validity by using Exploratory Factor analysis and reliability analysis through cronbach Alpha whose range was between 0.71 to 0.91. Assessing school performance entails categorizing a 7-point scale into three sections. Schools with low performance fall within the 1 to 2.33 range, while medium-performance schools range from 2.34 to 4.66. High-performance schools are categorized within the 4.67 to 7 range. Code "1" was considered for low performance school and code "2": was considering for high performance school.

Descriptive analysis data were utilised to determine the degree of TQM procedures and job satisfaction. Correlational design is suitable for assessing complicated patterns of relationships between measured variables (Stangor, 2011). TQM practises and work satisfaction were examined in connection to one another using Pearson correlation. In order to identify the TQM components that had the most effects on collegiate work satisfaction, Regression analysis was used.

FINDINGS AND DISCUSSION

A. Level of TQM practices in HPS and LPS

In order to address this inquiry, the investigators employed descriptive analysis to calculate a mean value for each domain of the TQM practices. Subsequently, they compared these mean values for classification and interpretation, and also determined the level of TQM practices across various categories, as illustrated in Table 1 below.

Table 1 “The degree of TQM practices” in two different schools

TQM dimension	<u>Mean value (M) and standard deviation (SD)</u>			
	HPS	SD	LPS	SD
Executive Leadership Commitment	5.17	0.77	3.19	0.40
“Customer Focus”	4.39	0.89	2.53	0.51
“Training and Education”	4.32	1.00	3.33	0.18
“Employee Engagement”	5.05	1.03	3.34	0.29
“Ongoing Improvement”	4.97	0.77	2.71	0.51
Total	4.87	0.74	3.07	0.27

Based on Table 1, the results show that the level of TQM activities in high performance schools is greater with an average of 4.87, while the average values for each TQM dimension are high for top management commitment (M = 5.17, SD = 0.77), relatively high level for customer focus, (M = 4.39, SD = 0.89), also showed high level for training and education (M = 4.32, SD = 1.0), and the mean value showed high level for staff involvement (M = 5.05, SD = 1.03) and the mean value showed high level for continuous improvement (M = 4.97, SD = .77). As for the low performance schools, the findings show that all the TQM dimensions had relatively low means; top management commitment (M = 3.19, SD = 0.40), customer focus (M = 2.53, SD = 0.51), training and higher education (M = 3.33, SD = 0.18), staff involvement (M = 3.34, SD = 0.29) and continuous improvement (M = 2.71, SD = 0.51). Overall, the level of TQM practises in high performing schools is high (M = 4.87, SD = 0.75), compared to the level of TQM practises in poor performing schools (M = 3.07, SD = 0.27).

B. Level of job satisfaction in HP and LP

As indicated in Table 2, the level of job satisfaction is determined by the different categories.

Table 2 The “degree of Job Satisfaction” in HP and LP

Job Satisfaction dimensions	<u>Mean value (M) and standard deviation (SD)</u>			
	HPS	SD	LPS	SD
Salary Incentives	4.23	0.61	4.21	0.51
Working Condition	5.77	0.66	3.80	0.19
Security	4.62	0.95	4.61	0.81
Advancement	3.95	0.77	3.94	0.61
Total	4.65	0.19	4.09	0.07

The results in Table 2 show that the mean values for all the job satisfaction dimensions in the HPS are relatively high; salary and incentive (M = 4.23, SD = 0.61), working condition (M = 5.77, SD = 0.66), security (M = 4.62, SD = 0.95), and advancement (M = 3.95, SD = 0.77). Overall, the total mean for the level of job satisfaction in HPS is high (M = 4.65, SD = 0.19) as compared to that in LP (M = 4.09, SD = 0.07). As a conclusion, job satisfaction

contributes to school performance whereby when the level of employees' job satisfaction is high, the performance of the school will also be high and vice versa. Similarly, job satisfaction affects the performance of the schools.

C. “Relationship between total quality management and job satisfaction”

“Is there any significant relationship between TQM and job satisfaction”? There is a significant, strong and positive correlation between TQM practices and job satisfaction ($r = 0.60, p < .01$). In testing the relationship between the variables, the value of 0.70 is considered strong, the range of 0.30 to 0.60 is considered moderate and any value less than 0.30 is considered weak. The results shown in Table 4.6 indicate that there is a positive moderate relationship between the two variables where the value of $r = 0.60, (p < 0.01)$. The model is well explained as the absolute value is close to 1. This correlation indicates that the higher the implementation of TQM, the higher the employee job satisfaction which leads to greater school performance.

Table 3 “Pearson correlation for TQM and job satisfaction”

Variables	Job satisfaction	
	Correlation value (r)	P
TQM	0.60	0.00

** “Correlation is significant at the 0.01 level (2-tailed)”.

D. The “dimensions of total quality management as a predictor of job satisfaction”

The results of the data analysis showed that only four (4) out of the five (5) variables can act as predictors of job satisfaction, namely Involvement of staff ($\beta = .52, p < 0.05$), Customer focus ($\beta = .52, p < 0.05$), Top Management Commitment ($\beta = .22, p < 0.05$), and Training & education ($\beta = .16, p < 0.05$), included in the “regression model ($p < 0.05$)”. This means that only four (4) variables are the predictors for job satisfaction ($p < 0.05$). The results also showed that the R square value of these (4) dimensions are high with the school climate. The results showed that the training & education (R square value .44) was the highest value which showed that training & education dimension influenced 44 percent towards school climate, which means that by implementing the practices of training & education in schools it can enhance the school climate by 44% as compared to the others dimensions, while the top management commitment influenced by 43%, customer focus influenced by 42% and involvement of staff influenced school climate by 37%. Hence, the results show that TQM is a predictor of job satisfaction. Table 4 below shows the results of the regression analysis.

Table 4 Regression analysis results TQM dimension over Job Satisfaction

Variables	B	Beta	R	R ²	Adj.R ²	T	p
Involvement of staff	.08	.52	.61	.37	.37	5.83	0.00
Customer focus	.08	.52	.64	.42	.41	5.40	0.00
Top Management Commitment	.03	.22	.65	.43	.42	2.36	0.00
Training & education	.03	.16	.66	.44	.43	2.03	0.00
Constant	3.77					96.22	0.00

The standard error: 0.14. All four of these dimensions contribute as much as 44% of the variance of TQM practices

Regression equations involved are as follows:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_nX_n.$$

$$Y \text{ (Dependent)} = 3.77 \text{ (constant)} + 0.08 \text{ (Involvement of staff)} + 0.08 \text{ (Customer focus)} + 0.03 \text{ (Top management commitment)} + 0.03 \text{ (Training and education)}.$$

CONCLUSION

Overall, the level of TQM practises in two separate categories was different. The level of TQM practices in high performance schools is higher than the level of TQM practices in poor performance schools. This finding is consistent with that of Raman, Chi Ling, and Khalid (2015) who stated that the quality of education in schools is influenced by the practice of TQM. In other words, when the level of TQM practice is high, the academic performance of the schools will be high as well. These findings also consistent with Manna, Calzone, Adinolfi, and Palumbo (2019) who stated that improvements in high school performance and teaching can only be achieved with the implementation of the quality management approach. Hence, the proper implementation of TQM practices in schools leads to a high level of school performance and academic achievement as compared to schools that neglect to do so.

To sum up, in high performance schools, the rate of job satisfaction activities is high relative to that of low performance schools. To conclude, job satisfaction contributes to educational outcomes, whereby the school's performance would also be high if the amount of job satisfaction activities is high, and the other way round. Furthermore, Rahman, Akhter and Khan (2017) also claimed that policy, relationship with supervisor and managerial staff, relationship with peers, working environment, and work security increase job satisfaction. On the bases of the results of their study, it was determined that job satisfaction is directly correlated to relationship with seniors and with peers, security and working environment. The findings also showed that working condition plays a more significant role in school performance. Similarly, the findings of the current study also showed that salary and incentives, working condition, security and advancement contributed towards the school performance.

This correlation indicates that the higher the implementation of TQM, the higher the employee job satisfaction which leads to greater school performance. The study conducted by Malik, Nawab, Naeem, and Danish (2010) indicated that job satisfaction and quality of supervision with salary and work itself have a significant and positive effect on university teachers. Work, wage, supervision, colleagues and raise or promotion have a strong influence on the relationship between employee's job satisfaction and their commitment to the organization. The variables measured are: (1) salary and incentives, (2) working condition, (3) security, and (4) recognition and reward. The Pearson correlation test showed that the variable of TQM is a significant positive relationship with employees' job satisfaction.

Involvement of staff, customer focus, top management commitment and training and education are the predictors of job satisfaction. Therefore, the results showed that TQM is the predictor of job satisfaction. These results support the findings of other previous studies (Crisci et al., 2018; Paul, 1998; Prajogo & Cooper, 2010; Selamat, Samsu & Kamalu, 2013) which found that TQM is a contributor to job satisfaction. The results showed that TQM implementation contribute towards a positive job satisfaction. The findings of this study highlight a fantastic school model that connect the magnitude of two different variables, total quality management, and work satisfaction, as illustrated in Figure 1. This model supports the teaching of TQM in different schools in Pakistan.

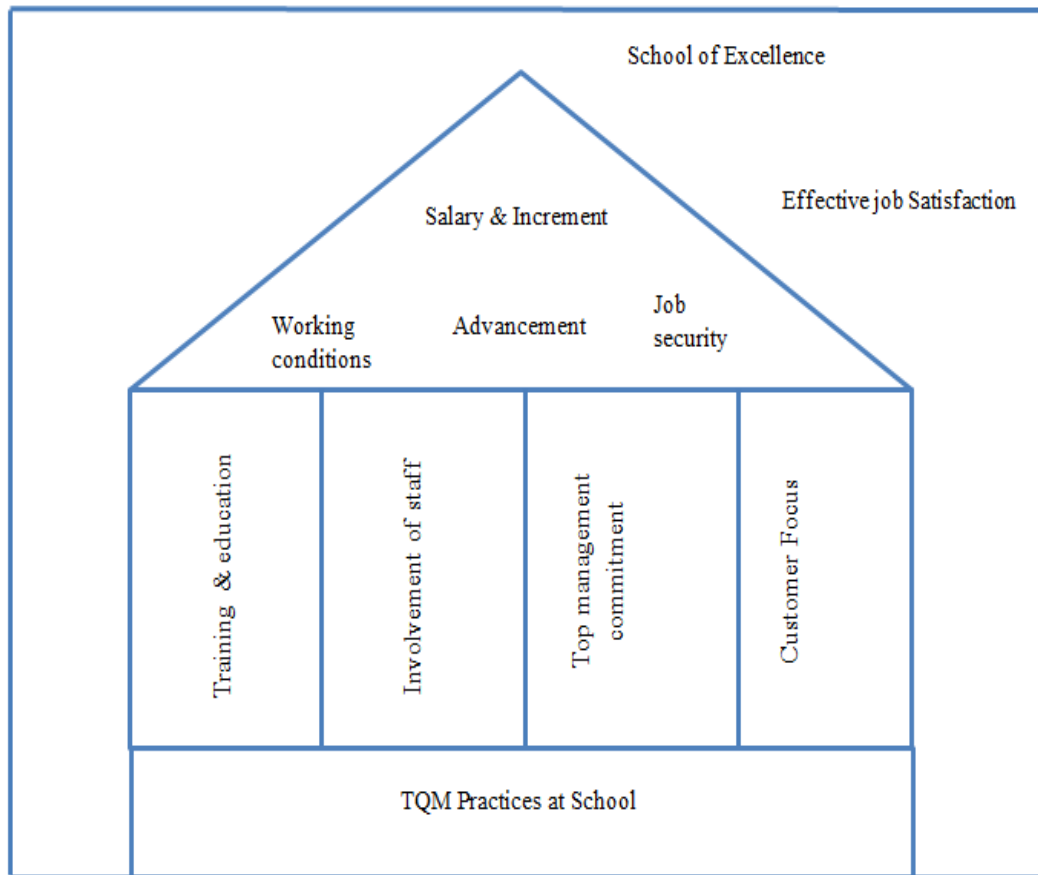


Figure 1 Excellent School Model

This study's findings suggest that TQM has a favourable influence on work satisfaction and helps to improve the quality of school. Though, the “degree of TQM practise” in these two schools differs. Finally, the study's findings give suggestions to senior school administrators on how to enhance programmes and training courses in order to ensure TQM adoption in their schools. Top management commitment may put this above-average school model into reality in their schools to improve student, teacher, and school performance quickly and effectively.

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