

**RESEARCH PAPER****Total Quality Management Implementation: Investigating the Impact on the Performance of Pakistani Universities****¹Dr. Rizwan Khan* ²Sidra Malik and ³Muhammad Zia Ur Rehman**

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***Corresponding Author:** dr.riztanoli@gmail.com**ABSTRACT**

This study investigated the impact of the quality management implementation on the performance of the universities of Pakistan. For this purpose, the researcher(s) sampled the university teachers teaching in the department of Education in the private universities. There were 300 teachers from social sciences discipline who have been selected with the help of Cluster sampling from 12 Public and Private Universities across Punjab, Pakistan. The data related to Total Quality Management have been collected with the help of a closed-ended questionnaire comprising 35 items. Whereas the data related to the university performance has been measured with scale comprising 33 items. This scale has been adapted from Afzal (2022). The results revealed a significantly moderate effect of TQM was on the performance of the universities. It has been recommended based on the results that the TQM should be implemented by the universities with true letter and spirit so that the universities' performance may be enhanced.

Keywords: Performance, TQM, Universities**Introduction**

In recent decades, quality has become a more significant component in a wide range of organizations. Total Quality Management (TQM) is a tried-and-true system that dates back to the 1920s and the work of statistician Shewhart. TQM was traditionally associated with the industry, but it is gradually gaining traction in the service industry. According to the literature, TQM has an equal impact on the service, manufacturing, and industrial sectors (Belimane & Chahed, 2021).

The education industry, like other sectors, places a premium on quality-driven operations, with higher education institutions seeking to meet expanding demand. Education, which has numerous aims, seeks to produce individuals capable of societal integration in a variety of domains (Keffane et al., 2020). As a result, educational quality has a significant impact on the standards of other businesses. TQM, a comprehensive approach to organizational development, evaluates all elements of a company. Researchers' development of several TQM implementation frameworks allows organizations to select the optimal framework for their specific needs (Ferdousi, 2018).

TQM procedures, according to studies, are extensively applied throughout the industrial and business sectors, with positive outcomes that increase organizational performance (Martínez-Gómez et al., 2018). To achieve the intended results, continuous efforts toward holistic organizational improvement are required, rather than isolated triumphs in discrete areas. TQM focuses on total organizational development, prompting educational institutions to adopt TQM approaches that are appropriate for their systems (Bouchikhi & Zine, 2017). Several TQM methodologies used in the service business to improve the quality of service-oriented organizations are recognized by TQM practitioners.

Researchers focused on higher education institutions, presenting insights on the acceptance and alignment of TQM approach in the education (Anil & Satish, 2019).

Developed nations pioneered TQM systems in education, yielding positive outcomes that prompted other countries to follow suit. Many constraints, however, restrict TQM implementation in undeveloped nations where TQM use in education is still in its early phases (Nogueiro et al., 2017). These challenges include a lack of understanding of TQM methodologies in education, team member opposition, and a lack of leadership commitment, all of which have been extensively investigated as obstacles to effective TQM adoption in education (Abbas et al., 2021).

Given the relevance of TQM, academic specialists are concentrating their attention on procedures that are necessary for its successful implementation. Scholars have discovered solutions that are equally beneficial for both the industrial and educational sectors after extensive research (Badran et al., 2019). Leadership involvement, vision communication, continuous improvement, staff engagement, restructuring and recognition, education and training, student participation, and stakeholder contact have all been highlighted as suitable for education in the literature. Experts highly advise using these TQM strategies to properly establish a quality program (Waheed-Ullah, 2018).

Each of these efforts is critical for developing a company's image and has a significant influence on its success (Khan et al., 2019). In Pakistan's educational system, quality education is now a serious issue. Because of the growing popularity of TQM, the education sector has been urged to assess its quality programs and operate within frameworks that contribute considerably to overall institutional performance. Despite several techniques and activities created and implemented to deliver excellent education, the goal of excellence remains exclusive (Zwain et al., 2017).

Literature Review

Total Quality Management

It is a relatively new concept in the education business, prompting a spate of academics to investigate the challenges surrounding its adoption in the classroom. This endeavor was done for the investigation of the impact that TQM has on the education if implemented (Khoja et al., 2017).

Extensive study in the industrial and manufacturing sectors has examined TQM from a variety of perspectives, significantly contributing to current understanding (Aminbeidokhti, 2016). TQM in education, according to Sallis (2005), is a concept of continuous improvement that offers critical practices for stakeholders. Several studies have been undertaken to discover techniques for building the TQM framework (Martínez-Gómez et al., 2020).

The literature does not give a single, unambiguous definition for TQM activities, but rather a spectrum of behaviors considered necessary for TQM growth (Jalilvand et al., 2018). The researchers identified nine key TQM strategies applicable in educational settings. These strategies include leadership dedication, strategic planning, continuous improvement, student-centric emphasis, process orientation, academic staff involvement, training initiatives, recognition systems, and data-driven management (Rasool et al., 2022).

Previous research has demonstrated that TQM procedures have a significant impact on organizational performance, including crucial components directly connected to quality improvement. This research relies heavily on leadership participation, quality vision, continuous improvement, staff engagement, training, recognition, and stakeholder collaboration (Mashagba, 2014). Effective leadership is crucial for successful quality

program implementation, with research emphasizing its significance in TQM execution in general. A clear organizational vision provides direction and inspiration, motivating individuals to achievement while also defining and guiding the operations of a company (Castillo, 2020).

Employee involvement and training are important components of Total Quality Management (TQM), since they enable continual improvement and innovation. Employee engagement not only increases business performance but also instills in employees a sense of ownership (Dahil & Karabulut, 2013). Involving students and other stakeholders in the quality improvement process has a significant influence. TQM actively fosters change by challenging traditional conventions and practices. These strategies, when combined, help a company succeed by boosting operational efficiency (Tisca et al., 2015).

Organizational Performance

Rather than representing a universally accepted and broadly encompassing concept, the term "performance" inherently adapts and tailors its definition to suit the specific context within which it is discussed. This adaptability becomes particularly evident within the paradigm of Total Quality Management (TQM), where the assessment and evaluation of performance assume a critical role, as underscored in the research by Nogueiro et al. (2020). The primary objective revolves around the meticulous construction of a comprehensive and all-encompassing summary that not only captures the diverse array of accomplishments but also meticulously examines the current state of affairs and strategically charts pathways for future developments. Within this context, the fundamental and overarching purpose of engaging in performance evaluation remains firmly rooted in its capacity to not just gauge but profoundly enhance and refine existing systems and methodologies. This, in turn, leads to a marked amplification of operational efficiency, aligning with the insights put forth by Ahmed & Ali (2016). There are various methods for evaluating performance, with objective and subjective performance assessments being the two most common. Quantitative measures, which give information on subjects like as product quality, quantity, profitability, and budgeting, are used to evaluate objective performance (Anil et al., 2019). Subjective performance evaluation, on the other hand, is based on respondents' or assessors' personal judgment and satisfaction with the services provided by their companies (Banerjea, 2018).

Within the context of this specific research inquiry, the assessment of performance is fundamentally entwined with a nuanced exploration of subjective determinants. These determinants encompass a wide spectrum of facets, inviting active participation from both students in their role as consumers and teaching faculty who function as crucial contributors within the educational system. Their collective input forms the bedrock of feedback concerning the efficacy and quality of services proffered by their respective academic institutions. This comprehensive feedback mechanism encapsulates a multifaceted evaluation, delving into aspects such as the alignment of services with students' anticipated outcomes, the holistic contentment derived from these services, the palpable caliber of service offerings, the pivotal aspect of student retention, and ultimately, the overarching success and standing of the institution as expounded by Barka & Ilhem (2016). Importantly, the study's findings establish a significant and observable correlation between the deliberate adoption and rigorous application of Total Quality Management (TQM) methodologies and the resultant performance benchmarks witnessed within the landscape of public universities situated in Punjab.

Traditionally, the exploration of organizational effectiveness within the education sector has predominantly fixated on the dynamics of leadership, overlooking other crucial components vital for achieving organizational triumph (Psomas & Antony, 2017). Sandbakken's 2006 argument delineated a fundamental perspective, asserting that the cornerstone of organizational efficiency rests upon several indispensable elements. These

include not only the cultivation of a compelling and forward-thinking vision but also a steadfast commitment to continuous enhancement, the empowerment of employees, and active involvement of stakeholders (Guessoum, 2019). Consequently, the prevailing discourse necessitates a significant pivot – a departure from the exclusive scrutiny of leadership traits. Rather, there is a growing impetus to broaden the scope and integrate a diverse array of essential Total Quality Management (TQM) practices, as recommended and underscored by Hilman et al. (2020). This pivotal transition acknowledges and embraces the imperative role played by a broader spectrum of TQM practices, extending beyond traditional leadership traits. Such an inclusive approach recognizes and appreciates their collective influence in sculpting and fortifying organizational performance, particularly within the educational landscape.

Material and Methods

This study has been conducted to investigate the impact of the quality management implementation on the performance of the universities of Pakistan. For this purpose, the researcher(s) sampled the university teachers teaching in the department of Education in the private universities. There were 300 teachers from social sciences discipline who have been selected with the help of Cluster sampling from 12 Public and Private Universities across Punjab, Pakistan. The data related to Total Quality Management have been collected with the help of a close-ended questionnaire comprising 35 items. This questionnaire has been adapted from Bibi et al. (2021). Similarly, the university performance has been measured with the help of a five-point Likert's rating scale comprising 33 items. This scale has been adapted from Afzal (2022). The psychometric validity of both of the instruments have been ensured while taking the experts' opinions. Then both of the instruments have been pilot-tested on the participants other than the actual participants of the research. The Cronbach's alpha was 0.79 for the aforementioned whereas 0.67 was for the later instrument which show the high reliability of the both of the instruments.

Results and Discussion

Table 1
Descriptive Statistics of TQM & Performance of Universities

	M	SD	Skewness	Kurtosis
TQM	115.69	13.02	-1.05	2.70
Performance of Universities	96.06	12.57	-.89	2.17

The results of Table 1 shows the Mean for TQM M= 115.69, SD=13.02, Skewness= -1.05, Kurtosis= 2.70 and Mean score for the Performance of Universities M= 96.06 and SD= 12.57, Skewness= .89, Kurtosis= 2.17. The aforementioned data have been found normally distributed as the values of Skewness and the Kurtosis are within ± 2 .

Table 2
Correlation of TQM & Performance of Universities

	TQM	Performance of Universities
TQM	1	.640
Performance of Universities		1

Note: N=300; $p < 0.05$

The results are shown in Table 2 which depicts a statistically significantly moderate relationship between the TQM and the performance of universities as as $r = .640$ along with $p < .05$.

Table 3
Regression Analysis Model Summary

R	R Square	Adjusted R Square	df	F	Sig.
.640	.410	.408	1	207.07	.000

The results revealed that there was variance in the performance of the universities which has been calculated in TQM. The fitness of the model has been confirmed with the value of F which was 207.07 and the p -value which was $p < .05$.

Table 4
Coefficient Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	24.53	5.00		4.90	.000
TQM	.61	.04	.64	14.39	.000

A significantly moderate effect of TQM was revealed on the performance of the universities based on the results as $\beta^{\wedge} = .64$ and the $p = .000$ ($p < .05$). Therefore, **H₀**: "There is no significant impact of TQM on the performance of universities." has been rejected.

The Linear relationship and normal distribution of data has been depicted in the Histogram.

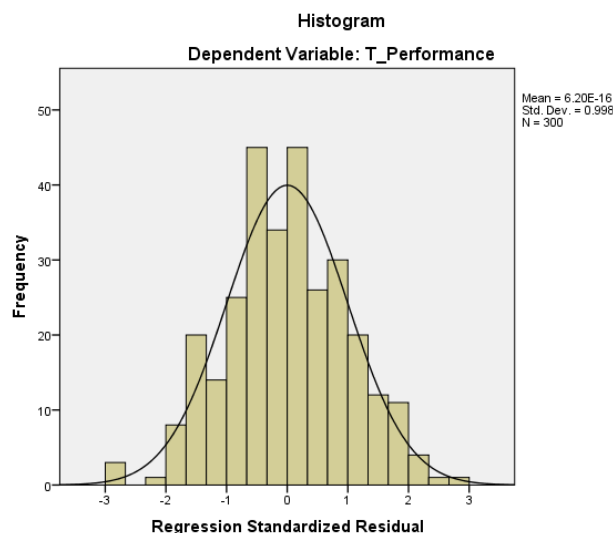


Figure 1 Histogram

Discussion

TQM procedures, according to studies, are extensively applied throughout the industrial and business sectors, with positive outcomes that increase organizational performance. To achieve the intended results, continuous efforts toward holistic organizational improvement are required, rather than isolated triumphs in discrete areas. TQM focuses on total organizational development, prompting educational institutions to adopt TQM approaches that are appropriate for their systems (Bouchikhi & Zine, 2017). Several TQM methodologies used in the service business to improve the quality of service-oriented organizations are recognized by TQM practitioners. Researchers focused on higher education institutions, presenting insights on the acceptance and alignment of TQM approach in the education (Anil & Satish, 2019).

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In Pakistani context, it also being focused however, there was the need of a study that could not only bring the picture of reality regarding the implementation of TQM to the light but also recommend the needful. Therefore, this study was conducted to fill in the aforementioned gap.

Conclusion

This study has been conducted to investigate the impact of the quality management implementation on the performance of the universities of Pakistan. For this purpose, the researcher(s) sampled the university teachers teaching in the department of Education in the private universities. There were 300 teachers from social sciences discipline sampled from 12 Public and Private Universities across Punjab, Pakistan. The data related to Total Quality Management have been collected with the help of a close-ended questionnaire comprising 35 items. Whereas the data related to the university performance has been measured with scale comprising 33 items. This scale has been adapted from Afzal (2022). The results revealed a significantly moderate effect of TQM was on the performance of the universities.

Recommendations

It has been recommended based on the results that the TQM should be implemented by the universities with true letter and spirit so that the universities' performance may be enhanced.

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