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KEYWORDS	ABSTRACT
Total Quality Management (TQM), Dar-e-Arqam Schools	This study examines how these four Total Quality Management (TQM) practices are related to academic performance in Dar-e-Arqam Schools, Pakistan. These practices are leadership commitment, staff involvement, monitoring practices and parent satisfaction. I used a quantitative, cross-sectional correlational design and analysed 437 valid questionnaire responses in RStudio. The results show that all four practices have a positive relationship with academic performance. When I included all four practices in the regression model, staff involvement, monitoring practices and parent satisfaction remained statistically significant. Leadership commitment was positive, but it was not statistically significant in the same model. Parent satisfaction has the largest contribution. Since I collected the data at one point in time and measured academic performance through respondents' views, these results show relationships and cannot prove cause and effect.
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Introduction

Total Quality Management (TQM) is about improving the work of an organisation and meeting the needs of the people it serves. Schools could use this approach in teaching, learning, staff management, parent communication and daily administration. It helps school teams review their work, identify problems and decide what should be improved.

Deming (1986) have explained that managers should create conditions in which people can improve their work. Juran (1988) also discussed planning, control and improvement, while Crosby (1979) have stressed that organizations should prevent mistakes and do the work correctly. Schools could use these ideas when leaders set priorities, support teachers and they check whether their plans have worked.

Research on TQM in education has often focused on the leadership commitment, staff involvement, continuous improvement and stakeholder needs. Kigozi and Ko (2019), for example, found that management commitment, continuous improvement and customer focus appeared frequently in studies of educational institutions. These areas should matter to schools because quality depends not only on classroom teaching but also on the systems that support teachers and students.

Academic performance can help us understand students' educational outcomes, but it does not show every part of school quality. TQM should not replace good teaching and learning. It could support them by helping schools plan their work, check progress and improve their daily processes. Earlier studies have also found links between quality management and educational outcomes.

In this study, I examine four TQM practices in Dar-e-Arjam Schools, a private school system in Pakistan. I have used responses from education professionals to see how leadership commitment, staff involvement, monitoring practices and parent satisfaction are related to academic performance. More research has looked at TQM in higher education and public schools, so this study could add useful evidence from a large private school system in Pakistan.

I have used a correlational design because I wanted to examine whether the variables were related. This design can show a relationship but it cannot prove that one practice has caused a change in another practice.

Objectives of the Study

To examine the relationship between leadership commitment and academic performance.

To examine the relationship between staff involvement and academic performance.

To examine the relationship between monitoring practices and academic performance.

To examine the relationship between parent satisfaction and academic performance.

To determine the combined contribution of the four selected TQM practices to academic performance.

Literature Review

Total Quality Management in Education

In education TQM means improving the work of a school or institution and involving people at levels. Sallis (2014) explained that educational quality includes teaching, learning, leadership, planning, administration and stakeholder satisfaction. Oakland (2014) also discussed processes, staff

involvement, measurement and continuous improvement. These ideas show that schools should work on quality in areas rather than depend on one activity.

Schools could apply TQM through leadership, staff involvement, process management, evaluation and attention to stakeholder needs. Kigozi and Ko (2019) found that management commitment, continuous improvement and customer focus appeared often in the education literature. This suggests that schools should review their work regularly and make improvements where they are needed.

Leadership Commitment

School leaders set priorities provide resources and support staff as they carry out quality activities. Deming (1986) explained that management should build systems that help people improve their work. In schools leaders could set expectations help teachers follow up on plans and use evidence when making decisions.

Kigozi and Ko (2019) identified top-management commitment as one of the TQM practices in educational institutions. Anastasiou and Ntokas (2024) also discussed leadership, collaboration, communication and teacher participation in education. These studies show that leadership can be important. Its contribution could depend on how well the school carries out other quality practices.

Staff Involvement

Staff involvement is another part of TQM. Teachers and other employees teach students assess their work provide support and take part in school activities. When schools involve staff in planning and improvement employees can share what they have learned from their work. Deming (1986) also stressed that employees should take part in improving processes.

Researchers have also examined how employee involvement is related to performance. Sadikoglu and Zehir (2010) for example found relationships between TQM practices and performance in Turkish firms. Their study focused on businesses than schools so the findings cannot be applied directly to education. However the idea could also be relevant to schools because teachers take a part in academic work.

Monitoring Practices

Schools should check whether staff are carrying out plans properly. They can observe classroom teaching, review assessment results, check plans and give feedback to teachers. Monitoring should not identify problems; it should also help staff understand what they could improve and what support they may need.

TQM gives importance to measurement, evaluation and process control (Oakland, 2014; Sfakianaki, 2019). Schools could use monitoring to identify gaps, support teachers and check whether staff have completed agreed actions. For this reason monitoring practices may be related to performance.

Parent Satisfaction

Parents play a role in school life. Their satisfaction may depend on how the school communicates, shares information about academic progress responds to concerns and provides services. Sallis (2014) included stakeholder satisfaction as part of quality. TQM also asks institutions to understand what stakeholders need and respond to those needs

Researchers in Pakistan have also studied quality management and student performance in schools. Parveen et al (2024) have studied the secondary schools in Punjab and reported a positive relationship between the quality management and student performance. Their findings also highlighted the role of school culture. This work provides a starting point for studying TQM in Pakistani schools.

Academic Performance

Academic performance helps us understand students educational outcomes. It may include achievement, progress in learning, assessment results and the extent to which students meet goals. Sakthivel et al. (2005) Examined TQM implementation and students satisfaction with performance. In this study I measured performance through questionnaire responses. Therefore the results show respondents views than direct student examination results.

Research Gap

Researchers have studied TQM in education. Some areas still need more attention. Much of the existing research has focused on education (Manatos et al., 2017) while fewer studies have examined schools. In Pakistan some studies have looked at secondary schools but there is less evidence from large private school systems. This study addresses that gap, by examining four TQM practices in Dar-e-Arham Schools. 4. Research Methodology

Research Design

I used a quantitative, cross-sectional correlational design. This approach allowed me to collect questionnaire responses about the selected TQM practices and academic performance and then examine how they were related. I collected the data at one point in time, so the results describe the relationships found in this sample rather than changes over time.

Population and Respondents

The respondents were education professionals working in Dar-e-Argam Schools under the centralised academic system. They included teachers, branch principals and branch directors. The final dataset had 437 valid responses from people working in different regions and with different levels of experience.

Sampling Technique

For the quantitative part, proportionate stratified random sampling was used to include different groups of education professionals, including teachers, branch principals and branch directors. The method was intended to make sure that these groups were represented in the sample.

Research Instrument

I collected the data through a structured questionnaire. It included demographic questions and statements about leadership commitment, staff involvement, monitoring practices, parent satisfaction and academic performance. Respondents rated each statement on a five-point Likert scale, from 1 (Strongly Disagree) to 5 (Strongly Agree).

Reliability

I used Cronbach's alpha to check whether the items in each scale measured their intended concept consistently. The results are shown below.

Construct	Items	Cronbach's α
Leadership Commitment	4	.820
Staff Involvement	4	.857
Monitoring Practices	5	.813
Parent Satisfaction	4	.842
Academic Performance	9	.902

All five scales had alpha values above .70. These results show acceptable internal consistency (Nunnally & Bernstein, 1994).

Validity and Factorability

I used the KMO measure and Bartlett's test to check whether the data were suitable for factor analysis. The KMO value was .960, and Bartlett's test was statistically significant, $\chi^2(300) = 6400.72, p < .001$. These results show that the data were suitable for factor analysis (Kaiser, 1974).

Data Analysis

I analysed the data in RStudio. First, I used descriptive statistics to summarise the variables. Then, I used Pearson correlation to examine the relationships between pairs of variables. Finally, I used multiple linear regression to examine the combined contribution of the four TQM practices to academic performance.

Ethical Considerations

Participation in the questionnaire was voluntary. I informed respondents that I was collecting the data for academic purposes. The questionnaire did not ask them to provide their names or school names, and I used the data for academic analysis.

Results

Demographic Profile

Variable	Category	Frequency	Percentage
Gender	Female	418	95.7
	Male	19	4.3
Age	20–30	305	69.8
	31–40	75	17.2
	41–50	48	11.0
	Above 50	9	2.1
Designation	Teacher	387	88.6
	Branch Principal	44	10.1
	Branch Director	6	1.4
Experience	Less than 5 years	250	57.2
	5–10 years	120	27.5
	11–15 years	30	6.9
	More than 15 years	37	8.5

Most respondents were female (95.7%), and 69.8% were between 20 and 30 years old. Teachers made up 88.6% of the sample, followed by branch principals (10.1%) and branch directors (1.4%). More than half of the respondents (57.2%) had less than five years of work experience.

Descriptive Statistics

Variable	Mean	SD
Leadership Commitment	4.21	.66
Staff Involvement	4.07	.70
Monitoring Practices	4.06	.62
Parent Satisfaction	4.19	.61

Academic Performance	4.22	.52
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All five variables had mean scores above 4.00. Academic Performance had the highest mean score at 4.22 (SD = .52), followed by Leadership Commitment at 4.21 (SD = .66). Parent Satisfaction had a mean score of 4.19 (SD = .61). Staff Involvement had a mean score of 4.07 (SD = .70), while Monitoring Practices had a mean score of 4.06 (SD = .62).

Correlation Analysis

Variable	1	2	3	4	5
1. Leadership Commitment	1.000	.728	.708	.658	.601
2. Staff Involvement	.728	1.000	.752	.726	.668
3. Monitoring Practices	.708	.752	1.000	.771	.697
4. Parent Satisfaction	.658	.726	.771	1.000	.750
5. Academic Performance	.601	.668	.697	.750	1.000

The results show that all four TQM practices had positive and statistically significant relationships with Academic Performance ($p < .001$). The correlation was .601 for Leadership Commitment, .668 for Staff Involvement, .697 for Monitoring Practices and .750 for Parent Satisfaction. Parent Satisfaction had the strongest relationship with Academic Performance in this sample.

The four TQM practices were also positively related to each other, with correlations ranging from .658 to .771. This means that the practices were connected in this school system. I therefore checked multicollinearity before interpreting the regression results.

Multiple Regression Analysis

I used Academic Performance as the dependent variable and Leadership Commitment, Staff Involvement, Monitoring Practices and Parent Satisfaction as predictors. The RStudio output showed $R^2 = .6105$ and adjusted $R^2 = .6069$, with $F(4, 432) = 169.30$, $p < .001$. Together, the four practices explained about 61% of the variation in Academic Performance scores in this sample.

Predictor	B	SE	t	p
Intercept	1.26964	.11747	10.808	< .001
Leadership Commitment	.04256	.03743	1.137	.256
Staff Involvement	.11573	.03888	2.976	.003

Monitoring Practices	.16423	.04618	3.556	< .001
Parent Satisfaction	.39014	.04367	8.934	< .001

The regression results show that Staff Involvement, Monitoring Practices and Parent Satisfaction were significant positive predictors. Leadership Commitment had a positive coefficient, but it was not statistically significant after I included the other predictors. Parent Satisfaction had the largest coefficient ($B = .39014$), followed by Monitoring Practices ($B = .16423$) and Staff Involvement ($B = .11573$).

Multicollinearity

Predictor	VIF
Leadership Commitment	2.47
Staff Involvement	3.02
Monitoring Practices	3.28
Parent Satisfaction	2.85

The VIF values ranged from 2.47 to 3.28. These values were below the commonly used threshold of 5, so the results did not show a serious multicollinearity problem among the predictors.

Discussion

The results show that each of the four Total Quality Management practices was positively related to Academic Performance. This matches studies that say school quality comes from many connected practices, not just one single activity (Sallis, 2014; Kigozi & Ko 2019).

Leadership Commitment was positively linked to Academic Performance ($r = .601$). It did not reach statistical significance in the regression model. This means that leadership commitment was connected to performance when looked at alone but it did not add a significant separate effect once the other three practices were included. One possible reason is that leadership may support performance by encouraging staff involvement helping with monitoring and improving communication with parents. This does not mean leadership is unimportant. It only shows how leadership contributes in this model.

Staff Involvement was positively linked to Academic Performance. Stayed significant in the regression model. This supports the Total Quality Management idea that staff should be involved in improving how an organization works. Teachers work directly with students so their experience can help schools find problems and make teaching and learning practices.

Monitoring Practices also made a positive contribution in the regression model. Schools can use observations, assessment reviews and follow-up meetings to check progress and see where teachers

might need support. The results show that monitoring was linked to performance in this sample but they do not prove that monitoring by itself causes better academic performance.

Parent Satisfaction had the correlation with Academic Performance and the largest regression coefficient. Respondents who gave ratings to parent satisfaction also gave higher ratings to academic performance. This shows the importance of keeping parents informed about their children's progress and listening to their concerns. However both measures came from questionnaires so the results cannot prove that parent satisfaction directly leads to exam results.

The results also show that the four practices are connected. Leadership gives direction staff involvement helps with work monitoring helps schools track progress and parent satisfaction reflects the views of a key group of stakeholders. In the regression model Parent Satisfaction, Monitoring Practices and Staff Involvement each made a contribution.

Concluding Remarks

This study looked at the relationship between four Total Quality Management practices and Academic Performance in Dar-e-Arqam Schools in Pakistan. All four practices had statistically significant correlations with Academic Performance. When all four were considered together Staff Involvement, Monitoring Practices and Parent Satisfaction were predictors. Leadership Commitment had a coefficient but was not statistically significant in the model. Parent Satisfaction made the contribution.

The findings suggest that school quality management involves connected areas. Schools can involve teachers in planning regularly review activities and keep parents informed about student progress. Leadership remains a part of Total Quality Management although its separate contribution was not statistically significant in this model after the other practices were included.

The study cannot prove cause and effect because the data were gathered at one point in time and academic performance was measured through respondents' views. Future studies could follow schools over a time use actual student achievement data and include other school systems to see if similar patterns appear.

Implications

School leaders can involve teachers in planning and encourage them to take part in activities that improve school performance.

Schools can monitor academic work through regular observations, feedback and follow-up. Monitoring should help staff grow not just highlight mistakes.

Schools can keep parents informed about students' progress their concerns and improvement plans.

School leaders can train staff on Total Quality Management so they understand how to keep improving the quality of their work.

Head-office teams can use monitoring results and feedback from stakeholders when planning academic improvements.

Limitations

This study has limitations. First all respondents were from one school system so the findings may not apply to every private school in Pakistan. Second academic performance was measured through respondents' views than actual student achievement data. Third the data were collected at one point in time so cause and effect cannot be proven. Future studies could include school systems and use actual student results.

Suggestions for Future Research

Future researchers can test this model in private and public school systems in Pakistan. They can collect data over time to see if changes in Total Quality Management practices are followed by changes in performance. They can also use student results and study other factors, such, as teacher motivation, school resources and school culture.

References

- Anastasiou, S., & Ntokas, K. (2024). Leadership and quality enhancement in secondary education: A comparative analysis of TQM and EFQM. *Merits*, 4(4), 440–452. <https://doi.org/10.3390/merits4040031>
- Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.
- Crosby, P. B. (1979). *Quality is free: The art of making quality certain*. McGraw-Hill.
- Deming, W. E. (1986). *Out of the crisis*. MIT Press.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
- International Organization for Standardization. (2018). *ISO 21001:2018 educational organizations—Management systems for educational organizations—Requirements with guidance for use*. ISO.
- Juran, J. M. (1988). *Juran on planning for quality*. Free Press.
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39(1), 31–36. <https://doi.org/10.1007/BF02291575>
- Kigozi, E., & Ko, Y. O. J. (2019). Total quality management (TQM) practices applied in education institutions: A systematic review of literature. *International Journal of Innovative Business Strategies*, 5(2), 341–352. <https://doi.org/10.20533/ijibs.2046.3626.2019.0045>

- Manatos, M. J., Sarrico, C. S., & Rosa, M. J. (2017). The integration of quality management in higher education institutions: A systematic literature review. *Total Quality Management & Business Excellence*, 28(1–2), 159–175. <https://doi.org/10.1080/14783363.2015.1050180>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
- Oakland, J. S. (2014). *Total quality management and operational excellence: Text with cases* (4th ed.). Routledge.
- Parveen, K., Phuc, T. Q. B., Alghamdi, A. A., Kumar, T., Aslam, S., Shafiq, M., & Saleem, A. (2024). The contribution of quality management practices to student performance: Mediated by school culture. *Heliyon*, 10(15), e34892. <https://doi.org/10.1016/j.heliyon.2024.e34892>
- Sadikoglu, E., & Zehir, C. (2010). Investigating the effects of innovation and employee performance on the relationship between total quality management practices and firm performance: An empirical study of Turkish firms. *International Journal of Production Economics*, 127(1), 13–26. <https://doi.org/10.1016/j.ijpe.2010.02.013>
- Sakthivel, P. B., Rajendran, G., & Raju, R. (2005). TQM implementation and students' satisfaction of academic performance. *The TQM Magazine*, 17(6), 573–589. <https://doi.org/10.1108/09544780510627660>
- Sallis, E. (2014). *Total quality management in education* (3rd ed.). Routledge.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson.
- Sfakianaki, E. (2019). A measurement instrument for implementing total quality management in Greek primary and secondary education. *International Journal of Educational Management*, 33(5), 1065–1081. <https://doi.org/10.1108/IJEM-08-2018-0245>
- Zakuan, N., Yusof, S. M., Laosirihongthong, T., & Shaharoun, A. M. (2010). Proposed relationship of total quality management and organisational performance using structural equation modelling. *Total Quality Management & Business Excellence*, 21(2), 185–203.