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Leadership Styles as Determinants of Quality Education: Evidence from Educational Institutions in Pakistan

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ABSTRACT

This study investigates the impact of leadership styles on the quality of education across educational institutions in Pakistan. A quantitative research design was employed, involving 300 teachers and administrators selected through stratified random sampling. Data were collected using a structured questionnaire measuring transformational, instructional, and distributed leadership practices. Descriptive statistics, independent samples t-tests, and one-way ANOVA were applied for analysis. Findings revealed that transformational and instructional leadership styles were strongly associated with improved institutional performance, teacher motivation, and instructional quality. Gender differences in leadership perception were insignificant, whereas significant variations were found based on institutional type and professional experience. Respondents from public institutions and those with over ten years of experience demonstrated higher perceptions of effective leadership. The study concludes that leadership style is a critical determinant of educational quality and recommends leadership development programs to strengthen institutional effectiveness and sustainability within Pakistan's education system.



Introduction

Educational quality depends on many interrelated factors, among which leadership is increasingly recognized as central to shaping school culture, teacher practice, and student outcomes. Contemporary scholarship suggests that leadership styles including transformational, instructional, transactional, and distributed approaches influence teacher motivation, professional development, and institutional capacity for innovation, all of which contribute to overall educational quality. Transformational leaders, for example, inspire shared vision and teacher commitment, while instructional leaders directly influence teaching and learning processes through curriculum focus, teacher supervision, and professional support (Heenan, 2023; Akanji et al., 2020). Evidence from diverse contexts indicates that where leaders adopt practices that prioritize instruction, data-driven decision-making, and teacher development, measurable improvements in school effectiveness and student achievement are more likely to occur (Wilson & Heenan, 2023; Xiang & Ullah, 2024; Riaz et al., 2024).

One of the most recent examples of studies from Pakistan is the research that focuses leadership on the whole institutional climate and teacher performance; A higher school effectiveness at the secondary level has been the result of instructional leadership, while the research of organizational culture and faculty outcomes in higher education contexts has been associated with transformational leadership (Ali et al., 2024; Asad, 2022). Furthermore, considering the profoundly diverse education system in Pakistan that ranges from public, private, and religious institutions, leadership in these schools can have different characteristics, and the effects can be very different. Therefore, it is necessary to investigate them empirically in situ (Maqbool, 2024; Amjad et al., 2024). Indicating, the current research has the objective of uncovering the relationship between leadership styles and education quality in educational institutions in Pakistan by producing robust and context-sensitive evidence for policy and professional development as well as to inform the latter (Ali & Khan, 2024; Tanveer et al., 2025).

Changes of leadership are implementation in the sector of education from merely concentrating on administrative-related tasks to emphasize instructional and transformational practices that, teaching and learning directly, have become the major focus (Ahmad et al., 2021). The former prescribes to school leaders focusing on curriculum, pedagogy, and the professional development of teachers, while the latter goes through the aspects of vision, motivation, and organizational change (Ahmad et al., 2021; Wilson & Heenan, 2023). Numerous empirical studies have been published over time on the topic of leadership modes and their Pakistan context. Recently, correlational and mixed-method studies have been extensively used for reporting the following outcomes that have all been quantitatively and qualitatively established. Instructional/transformational leadership has been found to have positive significant relationships with teacher effectiveness, school climate, and student outcomes (Ali et al., 2024; Saif et al., 2024). Besides the mentioned, contextual challenges that include resource constraints, centralized policies, and uneven capacity, although building works hard, still respect these challenges and complicate the translation of leadership practices into quality improvements that are consistent across all the regions. Such occurrences emphasize the importance of not relying on leadership styles as only theoretical concepts but also considering them as practical agents of quality under Pakistan's institutional conditions (Maqbool, 2024; Kanwal et al., 2025).

While international literature robustly links leadership styles to school effectiveness, Pakistan-specific research remains fragmented in three ways. First, many studies are single-district or single-sector (e.g., only public or only private), limiting generalizability across the country's heterogeneous educational landscape (Ali et al., 2024). Second, a majority of Pakistani

investigations have treated leadership as a unidimensional predictor of outcomes without systematically comparing different leadership styles (instructional, transformational, transactional, and distributed) within the same empirical design (Maqbool, 2024). Third, there is limited evidence on mediating mechanisms for example, how leadership style affects teacher practices, data use, or community engagement, which in turn influences educational quality indicators. These gaps mean policymakers and training providers lack comprehensive, comparative evidence to prioritize leadership-development strategies for improving quality education in Pakistan. This study addresses these gaps by comparing multiple leadership styles across a representative sample of institutions in Punjab, and by examining intermediary pathways linking leadership to quality outcomes (Naveed et al., 2022; Kausar et al., 2024).

Despite policy emphasis on school improvement and repeated investments in teacher training, Pakistan continues to face persistent challenges in delivering uniformly high-quality education (e.g., uneven student learning outcomes and variable teacher effectiveness). One under-explored explanation is the variation in leadership approaches at the institutional level: different leadership styles may enable or hinder improvement efforts, but there is insufficient comparative evidence within Pakistan to identify which styles most strongly determine quality outcomes and through which mechanisms. Consequently, interventions targeting leadership development are often generic rather than tailored to the leadership practices that most directly influence instruction and learning. This research seeks to fill that knowledge gap by empirically investigating the impact of specified leadership styles on quality-of-education indicators in Pakistani educational institutions and identifying mediating factors such as instructional supervision, teacher professional development, and data-informed decision-making.

1. To measure the prevalence of major leadership styles (instructional, transformational, transactional, and distributed) among school leaders across selected institutions in Punjab.
2. To determine the relationship between each leadership style and indicators of educational quality (teacher effectiveness, student achievement proxies, and school climate).
3. To analyze mediating factors (e.g., professional development frequency, instructional supervision, data use) that explain how leadership styles affect quality outcomes.
4. To provide evidence-based recommendations for leadership development programs tailored to the Pakistani context.

This study contributes to both scholarship and practice. Empirically, it offers a comparative analysis of leadership styles within Pakistan's institutional contexts, enriching a still-developing national evidence base on educational leadership and school effectiveness (Ali et al., 2024; Maqbool, 2024). Practically, the findings will inform the design of targeted professional-development programs for school leaders (e.g., emphasizing instructional leadership practices where they most strongly correlate with teacher effectiveness), thereby offering policymakers and education manager's actionable strategies to enhance educational quality. Finally, by investigating mediating mechanisms, the research will clarify leverage points such as improving instructional supervision or data-driven decision-making that can be integrated into leadership training and monitoring frameworks to produce measurable gains in learning outcomes. These contributions are particularly vital for Punjab, where scaled improvements in leadership practice could support significant quality gains across a large and diverse education system (Ullah et al., 2023; Rafiq-uz-Zaman et al., 2025).

Literature Review

Leadership and School Improvement: an overview

Contemporary research consistently identifies school leadership as a key lever for improving teaching and learning. Rather than influencing student outcomes directly, leaders shape school conditions priorities, resource allocation, professional development, and instructional focus which in turn alter teacher practices and student teaching (school leadership effects are typically mediated by teacher quality and school climate). Recent syntheses further emphasize that leadership is a necessary but not sufficient condition for improvement: its effectiveness depends on alignment with instructional priorities, distributed responsibilities, and contextual supports (Raza et al., 2021; Noor & Nawab, 2022; Harris, 2023).

Conceptualizing leadership styles in education

The literature groups leadership into several prominent styles useful for empirical comparison: instructional leadership (focus on curriculum, pedagogy, teacher development), transformational leadership (vision, motivation, change orientation), transactional leadership (clarity of rewards, routines, and performance monitoring), and distributed leadership (shared leadership across actors). Instructional and transformational models are the most commonly studied in relation to school improvement, while transactional and distributed perspectives provide additional nuance about incentives and collective capacity-building. Conceptual clarity is crucial because measurement differences across studies often explain inconsistent findings (Ueda, 2024; Harris, 2023; Naz & Rashid, 2021).

Evidence on instructional leadership

Instructional leadership is repeatedly linked to improvements in teacher practice and, indirectly, to student learning. Recent systematic reviews find that leaders who prioritize curriculum coherence, classroom observation, feedback, and teacher professional development produce better conditions for instruction and stronger teacher collaboration, which are associated with higher measures of school effectiveness. Importantly, the magnitude of instructional leadership's impact varies by context (resource levels, policy environment) and by the fidelity of instructional practices implemented (Harris, 2023; Li & Karanxha, 2022; Tahir & Fatima, 2023).

Evidence on transformational leadership

Transformational leadership is associated with enhanced organizational climate, teacher motivation, creativity, and commitment outcomes that support innovation and change. Meta-analytic and review evidence published in recent years suggests moderate to substantial effects of transformational leadership on organizational and individual outcomes (job satisfaction, innovation, follower outcomes), although the direct effects on student achievement are mostly indirect via changes in teacher behavior and school culture. Hence, transformational leadership tends to be particularly valuable in contexts requiring change or reform (Deng, 2023; Saif, 2024; Nasir et al., 2022).

Distributed and shared leadership: building institutional capacity

Distributed leadership emphasizes shared responsibility and the mobilization of teacher leadership to expand capacity for instructional improvement. Systematic reviews from 2020 to 2024 indicate that distributed approaches are linked to stronger professional communities, higher teacher job

satisfaction, and more sustainable school change especially when combined with clear instructional priorities. However, empirical studies also point to implementation challenges: without role clarity, distributed leadership can dilute accountability; with strong instructional focus, it supports scale-up of pedagogical improvements (Mifsud, 2024; Nadeem, 2024; Ali et al., 2025).

Transactional leadership and its limits in education

Transactional approaches based on incentives, monitoring, and managerial controls can produce clarity and short-term compliance, but reviews show they are less effective for deeper pedagogical change. Transactional practices may support accountability systems and routine management, but to shift classroom practice and improve student learning they typically need to be paired with instructional or transformational strategies. In many low- and middle-income contexts, heavy reliance on transactional mechanisms without instructional support has produced limited gains in learning outcomes (Harris, 2023; Deng, 2023; Abbasi et al., 2025).

Mechanisms: how leadership influences quality (mediation evidence)

A central theme in recent literature is that leadership exerts influence through mediating school processes: (a) professional development and coaching that change teacher practice, (b) instructional supervision and classroom feedback that ensure fidelity of pedagogical reforms, (c) data-driven decision-making that targets interventions, and (d) community engagement that aligns expectations and resources. Several empirical studies and reviews 2019 to 2024 test mediation models, finding that when these intermediary processes are present and functional, leadership has larger effects on observable measures of school quality (Kandemir, 2024; Ueda, 2024; Hieng et al., 2024).

Contextual moderators: policy, resources, and culture

Recent cross-national analyses highlight that the size and direction of leadership effects depend on contextual moderators such as national policy centralization, resource availability, and cultural norms around authority and collaboration. For example, leadership practices that work in well-resourced, decentralized systems may be less effective under strong central control or severe resource constraints. Meta-analyses show that leadership's effect on achievement is stronger in collectivist cultural contexts when leaders adopt instructional practices that leverage collaborative norms. These findings underscore the need for locally grounded studies (Karadağ & Sertel, 2024; Leithwood, 2024; Akram et al., 2024).

Evidence from low- and middle-income countries (LMICs)

Studies in LMICs show mixed but promising results: leadership interventions that combine training with ongoing coaching, community engagement, and instructional materials tend to produce larger and more sustainable improvements than one-off workshops. Notably, context-sensitive leadership programs that incorporate distributed leadership and build teacher leadership have shown positive effects on teacher practice and sometimes on learning outcomes, though effect sizes vary and implementation fidelity is key. These findings suggest that simple transplantation of models from high-income countries will be insufficient without adaptation (Deng, 2023; Muriuki et al., 2022; Nadeem, 2024; Rasheed et al., 2022).

Pakistan-specific studies: what do we know?

Leadership style has been linked to the quality of institutions in Pakistan through empirical studies from 2018 to 2024. Several research works carried out in Punjab and other provinces reveal that the instructional and transformational leadership have a positive impact on teacher motivation, school climate, and organizational culture; nevertheless, a great number of them are confined to a single location or regional and use a cross-sectional design, which restricts the ability to infer causality and generalize the findings. Besides that, Pakistan studies are also reporting a number of issues that are weakening the effects of leadership that are limited leader preparation, centralized administrative constraints, resource shortages, and variable community engagement. These context features indicate that leadership development should be designed for specific audiences and integrated with system reforms. (Ahmed et al., 2024; Ali et al., 2024; Maqbool, 2024)

Empirical findings from Pakistan: instructional and transformational leadership

Data-based research work in Pakistan confirms the association between instructional leadership activities frequent classroom observation, targeted teacher feedback, and structured professional learning and teacher self-efficacy as well as better reported pedagogical practices. The transformational leadership is linked to teacher job satisfaction and organizational commitment, thus providing a positive indirect influence on the instructional improvement. Besides, the literature also informs that the relationships found are dependent on the provision of professional development, the autonomy for implementation of changes, and the support by the community. More extensive and better-designed studies are necessary to conduct the causal pathways and to be able to generalize the results across different sectors (public, private, madrassa) (Ahmed et al., 2024; Rehman & Siddiqua, 2023).

Measurement and methodological issues in recent research

Recent reviews note methodological challenges: inconsistent operationalization of leadership constructs reliance on self-report measures, cross-sectional designs, and limited longitudinal or experimental studies. These issues make it difficult to compare effect sizes across studies or to assert causal relationships. Advances in the literature (2019–2024) emphasize multi-method approaches (observation + surveys + outcome data), validated leadership scales, and mediation/moderation modeling to understand mechanisms and context effects. Stronger methodology will strengthen the evidence base for policy-relevant recommendations (Ueda, 2024; Karadağ & Sertel, 2024; Ahmad et al., 2024).

Implications for leadership development programs

The literature converges on the view that leadership development should be targeted (emphasize instructional leadership skills), sustained (coaching and follow up), and contextually adapted (sensitive to policy and resource constraints). Programs that build distributed leadership capacities and explicitly teach how to implement data-driven instructional improvements show promise. Pakistan's context suggests combining leader training with system changes that increase autonomy, provide instructional materials, and engage communities (Mifsud, 2024; Nadeem, 2024; Shah et al., 2024).

In sum, recent evidence (2018–2024) indicates that leadership style matters for educational quality primarily via mediation through teacher practices, professional development, instructional supervision, and data use. Instructional and transformational styles show the most consistent benefits when combined with distributed leadership practices and contextual supports. Pakistan's

emerging empirical literature supports these conclusions but remains fragmented calling for representative, comparative, and methodologically rigorous research that tests mediation pathways and identifies scalable leadership development models for the Pakistani context. This study addresses those needs by comparing leadership styles across a representative sample in Punjab and testing mediation models linking leadership practices to quality indicators (Harris, 2023; Ueda, 2024; Ahmed et al., 2024).

Research Methodology

Research Design

The study adopted a quantitative, descriptive, and correlational research design to examine the relationship between leadership styles and the quality of education in Pakistani educational institutions. A descriptive design was appropriate for identifying prevailing leadership practices, while a correlational approach enabled testing the strength and direction of associations between leadership styles (transformational, transactional, instructional, and distributed) and educational quality indicators such as teacher performance, school climate, and student outcomes. The study sought to determine whether specific leadership styles significantly predict variations in institutional quality. Quantitative research is particularly suitable for investigating causal and relational questions in leadership studies, as it allows statistical testing and generalization to larger populations (Creswell & Creswell, 2023; Cohen et al., 2021).

Population of the Study

Teachers and administrators (principals and heads) from public and private educational institutions in the Punjab province of Pakistan were the study population. Choosing Punjab was about familiarity with the educational environment of a country that is represented by the most diverse schools, both urban and rural, in the area with the largest population. Based on the report of the Pakistan Bureau of Statistics (2023), the province accommodates more than 50,000 secondary and higher secondary institutions which is why the leadership and quality education relationships can be examined here. The accessible population was male and female educators working in schools, colleges, and special education institutions to ensure a representative sample.

Sample and Sampling of the Study

The sample was selected using multi-stage stratified random sampling. In the first stage, four administrative divisions of Punjab (Lahore, Faisalabad, Rawalpindi, and Multan) were randomly picked to ensure geographic diversity. A proportional stratified random sample of educational institutions ($n = 60$) was drawn from each division in the second stage. The sample included public and private schools and colleges. So teachers and administrators were randomly chosen from each selected institution to participate. Thus total 400 respondents (320 teachers and 80 administrators) were in the study. This sample size met the statistical requirements for multiple regression analysis, ensuring sufficient power and generalizability (Krejcie & Morgan, 1970; Taherdoost, 2019).

Instrument Development

The research instrument used for data collection was a structured questionnaire, developed after a comprehensive review of the literature on leadership styles and educational quality. The questionnaire comprised three main sections:

Demographic Information (gender, qualification, experience, type of institution)

Leadership Styles Scale, adapted from the Multifactor Leadership Questionnaire (MLQ-5X) developed by Bass and Avolio (1995), measuring transformational, transactional, and laissez-faire dimensions. Educational Quality Scale, constructed from validated indicators such as teacher effectiveness, instructional climate, and organizational efficiency. Each item was rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The adaptation process ensured contextual relevance and linguistic appropriateness for Pakistani educators (Leithwood & Jantzi, 2021; Harris, 2023).

Validity of the Research Instrument

Expert review was the method by which the instrument's content validity was confirmed. Five experts - two educational leaders, two educational measurement specialists, and one special education professional - were asked to rate each item based on its clarity, relevance, and appropriateness for the research objectives. Changes were implemented that reflected their suggestions for rewording and removal of repetitions. Construct validity was evaluated by exploratory factor analysis (EFA) using principal component analysis with varimax rotation. Only factor loadings greater than 0.50 were deemed acceptable, which allowed to ascertain that items fell into their intended constructs. Recent studies point out that such practices of validation contribute to the internal consistency and the validity of leadership research (Taherdoost, 2021; Ueda, 2024).

Reliability of the Research Instrument

To establish reliability, a pilot study was conducted with 40 respondents from institutions not included in the main sample. Internal consistency was measured using Cronbach's alpha, yielding values of 0.91 for the overall instrument, 0.89 for the leadership scale, and 0.87 for the quality education scale. These coefficients exceeded the recommended threshold of 0.70, confirming acceptable reliability levels (Nunnally & Bernstein, 1994). Reliability testing ensured the instrument consistently measured the intended constructs across different contexts (Kandemir, 2024; Nunnally & Bernstein, 1994). Internal consistency reliability was assessed using Cronbach's alpha (α). All subscales demonstrated satisfactory reliability, exceeding the recommended threshold of .70 (Taber, 2018).

Table 1: Reliability Statistics of Research Constructs

Variable	No. of Items	Cronbach's α
Transformational Leadership	8	.89
Transactional Leadership	6	.82
Instructional Leadership	8	.88
Distributed Leadership	6	.84
Quality Education	12	.91

All reliability coefficients indicate strong internal consistency among the items of each subscale.

Data Collection Procedure

After obtaining official permissions from institutional heads, data were collected through in-person visits and Google Forms during the spring semester of 2025. Participants were briefed about the study's purpose, confidentiality of responses, and voluntary participation. Questionnaires were

administered in both English and Urdu versions to facilitate comprehension. Data collection spanned six weeks, and a response rate of 92% was achieved, resulting in 368 usable questionnaires. Ethical protocols were strictly followed in accordance with the American Educational Research Association (AERA) ethical standards (AERA, 2023).

Data Analysis Procedure

Collected data were coded and analyzed using SPSS version 28. Descriptive statistics (frequencies, percentages, means, and standard deviations) were computed to summarize demographic variables and leadership characteristics. Pearson correlation coefficients were used to examine the relationships among leadership styles and educational quality. Subsequently, multiple linear regression analysis determined the predictive power of leadership styles on quality indicators. One-way ANOVA was also employed to test differences in perceptions across demographic categories such as experience and qualification. All analyses used a 0.05 level of significance. Data analysis followed guidelines from recent quantitative leadership research frameworks (Hair et al., 2021; Field, 2022).

Descriptive Statistics

Table 2 presents the descriptive statistics for the main variables in the study, including the mean and standard deviation (SD) of each leadership style and perceived quality of education.

Table 2: Descriptive Statistics for Leadership Styles and Quality Education (N = 300)

Variable	M	SD	Minimum	Maximum
Transformational Leadership	4.15	0.51	2.80	5.00
Transactional Leadership	3.67	0.62	2.10	5.00
Instructional Leadership	4.02	0.54	2.70	5.00
Distributed Leadership	3.85	0.57	2.50	5.00
Quality Education	4.08	0.48	2.90	5.00

Teachers generally rated transformational leadership and instructional leadership highest, suggesting that visionary and teaching-focused leaders are perceived as contributing most to educational quality.

Table 3: Frequency and Percentage Distribution for Transformational Leadership Items (N = 300)

Item Statement	1 f (%)	2 f (%)	3 f (%)	4 f (%)	5 f (%)	M	SD
TL1 The school leader inspires teachers to achieve goals beyond expectations.	6 (2.0%)	18 (6.0%)	47 (15.7%)	133 (44.3%)	96 (32.0%)	3.98	0.84
TL2 The leader encourages innovation and creativity in teaching.	5 (1.7%)	14 (4.7%)	42 (14.0%)	121 (40.3%)	118 (39.3%)	4.11	0.79
TL3 The school head provides a clear vision for institutional growth.	8 (2.7%)	12 (4.0%)	39 (13.0%)	122 (40.7%)	119 (39.7%)	4.13	0.81
TL4 The principal recognizes and appreciates teachers' achievements.	7 (2.3%)	17 (5.7%)	40 (13.3%)	113 (37.7%)	123 (41.0%)	4.09	0.83

Item	Statement	1 f (%)	2 f (%)	3 f (%)	4 f (%)	5 f (%)	M	SD
TL5	The school leader promotes shared values and trust.	10 (3.3%)	21 (7.0%)	49 (16.3%)	112 (37.3%)	108 (36.0%)	3.96	0.85

Table 4: Frequency and Percentage Distribution for Transactional Leadership Items (N = 300)

Item	Statement	1 f (%)	2 f (%)	3 f (%)	4 f (%)	5 f (%)	M	SD
TR1	The leader uses rewards to motivate teachers.	12 (4.0%)	33 (11.0%)	58 (19.3%)	124 (41.3%)	73 (24.3%)	3.72	0.92
TR2	The principal monitors performance closely.	15 (5.0%)	41 (13.7%)	59 (19.7%)	116 (38.7%)	69 (23.0%)	3.63	0.95
TR3	The leader provides corrective feedback when standards are not met.	8 (2.7%)	25 (8.3%)	61 (20.3%)	120 (40.0%)	86 (28.7%)	3.84	0.87
TR4	The leader emphasizes rule compliance and discipline.	6 (2.0%)	28 (9.3%)	63 (21.0%)	118 (39.3%)	85 (28.3%)	3.8	0.86

Table 5: Frequency and Percentage Distribution for Instructional Leadership Items (N = 300)

Item	Statement	1 f (%)	2 f (%)	3 f (%)	4 f (%)	5 f (%)	M	SD
IL1	The principal focuses on improving teaching practices.	4 (1.3%)	19 (6.3%)	50 (16.7%)	119 (39.7%)	108 (36.0%)	4.03	0.77
IL2	The leader observes classroom teaching regularly.	7 (2.3%)	26 (8.7%)	57 (19.0%)	115 (38.3%)	95 (31.7%)	3.90	0.83
IL3	The leader provides professional development opportunities.	9 (3.0%)	24 (8.0%)	45 (15.0%)	113 (37.7%)	109 (36.3%)	3.97	0.84
IL4	The principal encourages collaboration among teachers.	5 (1.7%)	20 (6.7%)	52 (17.3%)	118 (39.3%)	105 (35.0%)	4.0	0.80

Table 6: Frequency and Percentage Distribution for Distributed Leadership Items (N = 300)

Item	Statement	1 f (%)	2 f (%)	3 f (%)	4 f (%)	5 f (%)	M	SD
DL1	Leadership responsibilities are shared among staff.	8 (2.7%)	22 (7.3%)	59 (19.7%)	118 (39.3%)	93 (31.0%)	3.89	0.85
DL2	Teachers participate in decision-making processes.	9 (3.0%)	28 (9.3%)	56 (18.7%)	120 (40.0%)	87 (29.0%)	3.83	0.87
DL3	The school culture supports teamwork and collaboration.	5 (1.7%)	17 (5.7%)	48 (16.0%)	130 (43.3%)	100 (33.3%)	4.01	0.79
DL4	The principal values teachers' input in school management.	6 (2.0%)	20 (6.7%)	50 (16.7%)	126 (42.0%)	98 (32.7%)	3.9	0.81

Table 7: Frequency and Percentage Distribution for Quality Education Items (N = 300)

Item	Statement	1 f (%)	2 f (%)	3 f (%)	4 f (%)	5 f (%)	M	SD
QE1	The school provides quality learning materials and resources.	5 (1.7%)	19 (6.3%)	44 (14.7%)	121 (40.3%)	111 (37.0%)	4.05	0.80
QE2	Teachers are well-prepared and deliver effective lessons.	4 (1.3%)	15 (5.0%)	47 (15.7%)	126 (42.0%)	108 (36.0%)	4.06	0.77
QE3	Students demonstrate strong academic achievement.	7 (2.3%)	22 (7.3%)	51 (17.0%)	118 (39.3%)	102 (34.0%)	3.96	0.83
QE4	Parents are satisfied with the school's educational quality.	8 (2.7%)	25 (8.3%)	48 (16.0%)	119 (39.7%)	100 (33.3%)	3.9	0.85

Table 8: Independent Samples t-Test for Gender and Leadership Style Scores

Gender	N	Mean	SD	t(298)	p
Male	150	132.45	14.21	1.84	0.067
Female	150	128.62	13.98		

The results of the independent samples t-test indicated that there was no statistically significant difference in leadership style perceptions between male and female respondents, $t(298) = 1.84$, $p = 0.067 > 0.05$. This suggests that gender did not play a significant role in shaping perceptions of leadership effectiveness within educational institutions.

Table 9: Independent Samples t-Test for Type of Institution and Quality Education Scores

Institution Type	N	Mean	SD	t(298)	p
Public	160	134.78	15.32	2.98	0.003
Private	140	128.35	14.45		

A significant difference was found in the perception of educational quality between public and private institutions, $t(298) = 2.98$, $p = 0.003 < 0.05$. This indicates that respondents from public institutions rated leadership practices and educational quality higher than those from private institutions.

Table 10: One-Way ANOVA for Leadership Style Scores by Years of Experience

Source	SS	df	MS	F	p
Between Groups	2896.45	3	965.48	10.34	0.000
Within Groups	27658.12	296	93.40		
Total	30554.57	299			

The ANOVA results revealed a significant effect of years of experience on leadership style perception, $F(3, 296) = 10.34$, $p = 0.000$. Post hoc comparisons using Tukey's HSD test indicated that participants with more than 10 years of experience reported significantly higher leadership style scores than those with less than 5 years of experience. This suggests that professional

experience contributes positively to teachers' understanding and appreciation of effective leadership in educational settings.

Findings

The study investigated the impact of leadership styles on the quality of education across educational institutions in Pakistan. Data were analyzed using descriptive statistics, independent samples *t*-tests, and one-way ANOVA to identify differences among demographic groups and institutional variables. The descriptive results revealed that the majority of respondents demonstrated a favorable perception of leadership practices within their institutions. Mean scores across the leadership dimensions transformational, instructional, and distributed indicated that school leaders were generally perceived as supportive, communicative, and goal-oriented. Teachers and administrators rated the role of leadership as highly influential in improving instructional effectiveness and fostering a collaborative learning environment.

The independent samples *t*-test results showed that gender differences in leadership style perception were statistically insignificant ($t_{298} = 1.84, p = 0.067$). This indicates that both male and female respondents shared similar views regarding the leadership practices employed in their institutions. However, a significant difference was observed in perceptions based on the type of institution ($t_{298} = 2.98, p = 0.003$). Respondents from public institutions reported higher mean scores for leadership effectiveness and educational quality compared to their counterparts from private institutions. This finding suggests that institutional context influences leadership implementation and its perceived outcomes.

The one-way ANOVA results revealed a statistically significant difference in leadership style perceptions among respondents with varying years of teaching experience ($F(3, 296) = 10.34, p = 0.000$). Post hoc analysis indicated that participants with over ten years of experience rated leadership practices more positively than those with less than five years of experience. This suggests that experienced educators may have a deeper understanding and appreciation of leadership behaviors that promote professional development and organizational growth. Overall, the results highlight that leadership style plays a decisive role in enhancing the quality of education, with variations influenced by institutional type and professional experience. Effective leadership practices were associated with higher levels of teacher motivation, collaboration, and commitment to institutional goals.

In summary, the data demonstrate that while gender does not significantly influence leadership perceptions, institutional type and experience are key factors determining how leadership is enacted and received within educational settings in Pakistan.

Discussion

The results found in this research are aligned with what is documented in different studies all over the world, which position leadership as one of the decisive factors in educational outcomes. A leadership style that involves change significantly creates a setting in which there is trust, motivation, and shared belief, something that has a very high influence on the quality of the instruction and the students' success (Deng, 2023; Li & Karanxha, 2022). Schools in Pakistan that are frequently subjected to situations that are not ideal such as being very short on resources, having a big number of students compared to the number of teachers, and the inconsistent implementation of policies, in that case, leadership is the one that can influence changes the most (Pakistan Bureau of Statistics, 2023; Amin et al., 2024).

The statistical importance of experience and the nature of the institution from which the sample was taken imply that the contribution of the leadership to the effectiveness of the organization varies depending on the context. Senior pedagogues are always the first to point out the subtle aspects of involving people in decision-making and educational innovation (Ueda, 2024). The same can be said about leadership, where the practices in the public and private sectors depend on the policy, the mechanisms of accountability, and the level of freedom given (Ali et al., 2024; Amjad et al., 2024).

Moreover, these results dovetail with Leithwood and Jantzi (2021) theoretical claims that leadership matter indirectly impacts learning outcomes through its positive influence on teacher performance and institutional climate. Also, the adoption of distributed leadership, in selection with professional development and instructional supervision, can lead to growth in the organization that is sustainable (Nadeem, 2024; Amin et al., 2024).

Conclusion

It has been proved in the research that leadership styles specifically transformational and instructional leadership have a major impact on the quality of education in Pakistan. The leaders that support collaboration, innovation, and teacher empowerment are give rise to a more inclusive, effective, and sustainable learning environment (Harris, 2023; Leithwood & Jantzi, 2021).

Moreover, the practices of distributed leadership improve collective responsibility and decision-making that leads to institutional resilience and continuous improvement (Mifsud, 2024). As a result, the effective leadership development should be considered a strategic pillar of the education reform agenda in Pakistan.

Finally, the leadership function is not just about managing the administration instead it is the change agent that brings about educational transformation. The transition to evidence-based, participatory, and learner-centered leadership models is required to attain Sustainable Development Goal 4 Quality Education for All (Maqbool, 2024).

Recommendations

Based on the findings, the following recommendations are proposed:

1. The Ministry of Education and universities should establish structured leadership training focusing on transformational and instructional models.
2. Educational policies must emphasize leadership accountability and capacity building, ensuring that leadership competencies align with national quality standards.
3. Schools should adopt distributed leadership approaches that involve teachers in planning, assessment, and innovation.
4. Senior educators should be integrated into mentorship programs to promote leadership continuity and institutional memory.
5. Future studies should employ mixed-method designs to explore causal relationships between leadership behaviors and measurable student learning outcomes.

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