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# Effects of Instructional Leadership Practices on Teacher Job Performance: The Mediating Role of Teacher Self-Efficacy and the Moderating Role of Leadership Training at Secondary School Level in Khyber Pakhtunkhwa, Pakistan

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**Abstract**
*Instructional leadership is intended to strengthen teaching and learning by setting clear academic goals, monitoring instruction, supporting teachers, and building a positive school climate. However, the processes through which instructional leadership relates to teachers' job performance, and the conditions under which this relationship may vary, require further examination in local educational contexts. This study examined the association between instructional leadership practices and teacher job performance among public secondary school teachers in five districts of Khyber Pakhtunkhwa, Pakistan. It also tested teacher self-efficacy as a mediator and leadership training as a moderator. A quantitative, cross-sectional correlational design was used. Although 500 questionnaire responses were collected, the final analytical sample comprised 441 teachers selected through district-wise random selection from the available responses. Data were analysed using descriptive statistics, reliability analysis, confirmatory factor analysis, structural equation modelling, bootstrapped mediation analysis, and an interaction test for moderation. The reported measurement model showed acceptable fit ($\chi^2$ = 695.748, df = 197, CMIN/DF = 3.532, CFI = .919, TLI = .905, RMSEA = .076, SRMR = .053). Instructional leadership was positively associated with teacher job performance (β = .229, p < .001) and teacher self-efficacy (β = .141, p = .003). Teacher self-efficacy was strongly associated with job performance (β = .641, p < .001). The indirect effect through self-efficacy was significant (β = .091, 95% bootstrap CI [.036, .150]), while the direct effect remained significant (β = .138, p < .001), indicating partial mediation. Leadership training was positively associated with job performance (β = .293, p < .001), but its interaction with instructional leadership was not significant (β = .067, p = .122). The findings highlight the importance of instructional leadership and teacher self-efficacy while indicating that the proposed moderating role of leadership training was not supported.*

***Keywords:*** *instructional leadership; teacher job performance; teacher self-efficacy; leadership training; mediation; moderation; Khyber Pakhtunkhwa*

**Introduction**

School leadership is an important school-level factor in the organization of teaching and learning. Teachers work directly with students, but school heads establish academic priorities, coordinate instructional work, provide feedback, and shape the professional conditions in which teachers carry out their duties. Leadership that gives sustained attention to teaching and learning is commonly described as instructional leadership. Rather than focusing only on administration, instructional leadership involves defining the school mission, managing the instructional programme, and fostering a supportive learning climate (Hallinger & Murphy, 1985).

Instructional leadership may be relevant to teacher job performance because school heads can influence the clarity of academic expectations, access to instructional support, opportunities for professional learning, and collaboration among teachers. Earlier research has linked leadership practices with school and teacher outcomes and has argued that leadership effects should be examined in relation to the context in which schools operate (Hallinger, 2011; Leithwood et al., 2020; Robinson et al., 2008). Nevertheless, a direct association does not fully explain how teachers respond to leadership or why teachers working in similar environments may report different levels of performance.

Teacher self-efficacy offers one possible explanation. Grounded in Social Cognitive Theory, self-efficacy refers to beliefs about one's capability to organize and perform the actions required for a task (Bandura, 1997). In teaching, these beliefs concern tasks such as motivating students, managing classroom behaviour, adapting instruction, and addressing learning difficulties. Teachers who believe they can manage instructional challenges may be more likely to persist, apply suitable strategies, and carry out their responsibilities effectively (Tschannen-Moran & Hoy, 2001). Supportive instructional leadership may contribute to these beliefs through constructive feedback, professional guidance, and opportunities to develop teaching skills.

Leadership training may also be relevant. Training can help school heads develop instructional knowledge, supervision skills, and the ability to support teacher development. It is therefore reasonable to test whether leadership training is associated with teacher performance and whether it changes the strength of the instructional-leadership–performance relationship. These are separate questions: a positive direct association with performance does not by itself establish a moderating effect.

This distinction is important in Khyber Pakhtunkhwa, where the present study focuses on public secondary schools in Karak, Kohat, Hangu, Bannu, and Lakki Marwat. The study brings together instructional leadership, teacher self-efficacy, and leadership training in one analytical model. Its objectives were to: (1) examine the association between instructional leadership practices and teacher job performance; (2) assess the association between instructional leadership and teacher self-efficacy; (3) examine the relationship between teacher self-efficacy and job performance; (4) test the mediating role of teacher self-efficacy; and (5) test whether leadership training moderates the relationship between instructional leadership and job performance.

**Theoretical Framework and Hypotheses**

## 2.1. Instructional leadership and teacher job performance

Hallinger and Murphy's (1985) framework describes instructional leadership through three connected dimensions: defining the school mission, managing the instructional programme, and promoting a positive school learning climate. These activities can support teachers by clarifying academic goals, coordinating teaching, monitoring progress, providing constructive feedback, and supporting professional development. The broader literature on successful school leadership also emphasizes that leadership practices influence the organizational conditions under which teachers work (Leithwood et al., 2020). On this basis, the study proposed:

H1: Instructional leadership practices are positively associated with teacher job performance.

## 2.2. Instructional leadership and teacher self-efficacy

Social Cognitive Theory proposes that people's beliefs, behaviour, and environmental experiences interact (Bandura, 1997). In school settings, instructional guidance, supportive feedback, and opportunities to learn may strengthen teachers' confidence in handling instructional responsibilities. The Teacher Sense of Efficacy Scale developed by Tschannen-Moran and Hoy (2001) reflects confidence in instructional strategies, classroom management, and student engagement. The study therefore proposed:

H2: Instructional leadership practices are positively associated with teacher self-efficacy.

## 2.3. Teacher self-efficacy and job performance

Teachers' efficacy beliefs may influence the effort they invest in teaching, their persistence when classroom challenges arise, and their willingness to adapt instructional practices. Self-efficacy is not a substitute for professional knowledge or adequate working conditions, but it can help explain differences in how teachers approach their responsibilities (Bandura, 1997; Tschannen-Moran & Hoy, 2001). The study proposed:

H3: Teacher self-efficacy is positively associated with teacher job performance.

## 2.4. The mediating role of teacher self-efficacy

Instructional leadership may relate to job performance both directly, through instructional direction and support, and indirectly, by shaping teachers' confidence in their professional capabilities. Testing mediation allows the study to examine whether part of the association between instructional leadership and job performance is statistically accounted for by teacher self-efficacy. The study proposed:

H4: Teacher self-efficacy mediates the relationship between instructional leadership practices and teacher job performance.

## 2.5. The moderating role of leadership training

Leadership training may develop school heads' knowledge and skills for applying instructional leadership. If training helps leaders implement these practices more effectively, the association between instructional leadership and teacher job performance may differ according to training. This is a moderation proposition and must be tested through the interaction term rather than inferred from a direct association between training and performance. The study proposed:

H5: Leadership training positively moderates the relationship between instructional leadership practices and teacher job performance.

**Methodology**

## 3.1. Research design and setting

The study used a quantitative, cross-sectional correlational design within a positivist approach. Data were collected at one point in time through a structured questionnaire. The study was conducted in public secondary schools in five districts of Khyber Pakhtunkhwa, Pakistan: Karak, Kohat, Hangu, Bannu, and Lakki Marwat. Because the design was cross-sectional and based on respondent reports, the findings are interpreted as statistical associations rather than proof of causal effects.

## 3.2. Population and sample

The stated population comprised 6,578 teachers in public secondary schools across the five selected districts. A minimum sample of 377 was calculated using Yamane's (1967) formula at a 5% precision level. A total of 500 questionnaire responses were collected. The final analytical sample contained 441 respondents selected through district-wise random selection from the available responses. The district distribution was Karak (n = 84), Kohat (n = 93), Hangu (n = 39), Bannu (n = 138), and Lakki Marwat (n = 87). The remaining 59 responses were not classified as invalid or incomplete; they were simply not included in the final analytical selection.

All 441 respondents in the final sample were male teachers working in boys' schools. This sample characteristic is important when interpreting the results and limits direct generalization to female teachers, girls' schools, private schools, or other provinces.

## 3.3. Measures

The questionnaire included demographic questions and measures of four main constructs: instructional leadership practices, teacher job performance, teacher self-efficacy, and leadership training. Responses to substantive items were recorded on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

Instructional leadership was assessed through eight adapted items (B1–B8) covering academic goal setting, communication of the school mission, monitoring of academic progress, instructional feedback, instructional resources, teacher development, classroom observation, and collaboration. The measure was informed by the Principal Instructional Management Rating Scale framework (Hallinger & Murphy, 1985; Hallinger & Wang, 2015).

Teacher job performance was initially measured through seven items (C1–C7) covering lesson preparation, lesson delivery, classroom management, teaching strategies, assessment and record keeping, participation in school duties, and continuous improvement. Teacher self-efficacy was initially measured through six items (E1–E6) concerning student motivation, classroom management, assessment strategies, adapting teaching, maintaining discipline, and supporting low-achieving students. The self-efficacy measure was informed by Tschannen-Moran and Hoy (2001). Leadership training was initially assessed through six items (F1–F6) concerning training effectiveness and its perceived contribution to leadership practices and school performance. The five-item direct-effect perception section (D1–D5) was used for descriptive reporting and was not treated as a fifth latent construct in the structural model.

### 3.4. Data analysis

Descriptive statistics were used to summarize respondent characteristics and item responses. Internal consistency was assessed using Cronbach's alpha. Confirmatory factor analysis (CFA) was used to assess the measurement model, and structural equation modelling (SEM) was used to examine the hypothesized relationships. The reported model-fit indices were the chi-square statistic, degrees of freedom, CMIN/DF, comparative fit index (CFI), Tucker–Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR).

Mediation was evaluated using a bootstrap procedure with 10,000 resamples. The indirect effect was treated as statistically significant when its 95% bootstrap confidence interval did not include zero. Moderation was examined through the interaction between standardized instructional leadership and leadership training scores. The interaction coefficient, rather than the training main effect alone, was used to determine whether the moderation hypothesis was supported.

### 3.5. Ethical considerations

Participation was voluntary, the questionnaire did not require personally identifying information, and results were analysed and reported in aggregate form. The thesis material supplied for this manuscript did not identify a formal ethics approval number; the relevant institutional approval or exemption details should be added here if required by the target journal.

**Findings and Results**

### 4.1. Respondent characteristics and descriptive findings

The final analytical sample consisted of 441 male teachers from boys' public secondary schools in five districts. Bannu contributed the largest district share (138; 31.29%), followed by Kohat (93; 21.09%), Lakki Marwat (87; 19.73%), Karak (84; 19.05%), and Hangu (39; 8.84%). The largest age group was 31–40 years (199; 45.12%). The most frequently reported qualification category was Master (136; 30.84%), and the largest teaching-experience group was 1–5 years (153; 34.69%). A total of 282 respondents (63.95%) worked in rural schools, while 159 (36.05%) worked in urban schools. Formal leadership training was reported by 192 respondents (43.54%); 249 (56.46%) reported no formal leadership training.

Across the main constructs, teacher self-efficacy had the highest reported mean (M = 4.483, SD = 0.415), followed by teacher job performance (M = 4.426, SD = 0.448), leadership training (M = 4.183, SD = 0.689), and instructional leadership practices (M = 3.864, SD = 1.008). The separate direct-effect perception section had a mean of 3.995 (SD = 0.986). These descriptive means indicate generally favourable self-reported views, but they should not be interpreted as objective measures of teaching quality.

### 4.2. Reliability and measurement model

The thesis reported initial Cronbach's alpha values of .946 for instructional leadership, .738 for teacher job performance, .722 for teacher self-efficacy, and .857 for leadership training. During measurement-model refinement, C7 and E6 were first removed because of weak item performance; additional items C1, E3, and F6 were then excluded from the final reported 22-indicator model. The final retained indicators were B1–B8 for instructional leadership, C2–C6 for teacher job performance, E1, E2, E4, and E5 for self-efficacy, and F1–F5 for leadership training. The reported refined-item alpha values were .781

for teacher job performance and .788 for teacher self-efficacy; instructional leadership and leadership training retained values of .946 and .857, respectively.

The final measurement model was reported to have the following fit: $\chi^2 = 695.748$, df = 197, CMIN/DF = 3.532, CFI = .919, TLI = .905, RMSEA = .076, and SRMR = .053. These indices were interpreted in the thesis as indicating acceptable model fit. Before submission, the final CFA output should be checked against the exact 22-indicator specification so that all reliability, loading, CR, AVE, and discriminant-validity values reported in the manuscript correspond to the same final model.

### 4.3. Structural relationships

| Structural path | Standardized β | p-value | Decision |
|---|---|---|---|
| Instructional leadership → Teacher job performance (total effect) | .229 | < .001 | Supported |
| Instructional leadership → Teacher self-efficacy | .141 | .003 | Supported |
| Teacher self-efficacy → Teacher job performance | .641 | < .001 | Supported |

Instructional leadership practices were positively associated with teacher job performance (β = .229, p < .001). Instructional leadership was also positively associated with teacher self-efficacy (β = .141, p = .003). Teacher self-efficacy had the strongest reported structural association with job performance (β = .641, p < .001). In the mediation model, the direct instructional leadership path remained significant after including self-efficacy (β = .138, p < .001), while the total effect was β = .229 (p < .001).

### 4.4. Mediation analysis

| Effect | β | 95% bootstrap CI | Interpretation |
|---|---|---|---|
| Indirect: instructional leadership → self-efficacy → job performance | .091 | [.036, .150] | Significant |
| Direct: instructional leadership → job performance, controlling for self-efficacy | .138 | Not reported | Significant; p < .001 |
| Total effect | .229 | Not reported | Significant; p < .001 |

The indirect effect of instructional leadership on teacher job performance through self-efficacy was positive and statistically significant (β = .091, 95% bootstrap CI [.036, .150]). Because the confidence interval did not include zero, the indirect effect was supported. The remaining direct effect was also

significant (β = .138, p < .001). Together, these results indicate partial mediation: teacher self-efficacy statistically accounted for part, but not all, of the association between instructional leadership and teacher job performance.

### 4.5. Moderation analysis

| Predictor | Standardized β | p-value | Decision |
|---|---|---|---|
| Instructional leadership | .159 | < .001 | Significant main effect |
| Leadership training | .293 | < .001 | Significant main effect |
| Instructional leadership × leadership training | .067 | .122 | Not significant |

Leadership training was positively associated with teacher job performance (β = .293, p < .001). However, the interaction between instructional leadership and leadership training was not statistically significant (β = .067, p = .122). Thus, the moderation hypothesis was not supported. The results distinguish the positive main association of leadership training from the unconfirmed proposition that training changes the strength of the instructional leadership–performance relationship.

**Discussion**

The study examined instructional leadership and teacher job performance in public secondary schools across five districts of Khyber Pakhtunkhwa, with teacher self-efficacy as a mediator and leadership training as a proposed moderator. Three main patterns emerged: instructional leadership was positively associated with job performance; teacher self-efficacy partially mediated this association; and leadership training was positively associated with job performance but did not significantly moderate the instructional leadership–performance relationship.

### 5.1. Instructional leadership and job performance

The positive association between instructional leadership and teacher job performance is consistent with the view that school heads influence the conditions in which teachers plan, deliver, and improve instruction. Hallinger and Murphy's (1985) framework places academic mission, instructional programme management, and learning climate at the centre of school leadership. The current result supports the relevance of these practices in the sampled schools. However, because the data are cross-sectional and self-reported, the finding should be described as an association rather than definitive evidence that leadership practices caused higher performance.

### 5.2. Instructional leadership and teacher self-efficacy

Instructional leadership was also positively associated with teacher self-efficacy, although the standardized coefficient was comparatively modest (β = .141). The result is compatible with Social Cognitive Theory, which emphasizes the interaction between personal beliefs and environmental experiences (Bandura, 1997). Constructive feedback, academic guidance, and opportunities for professional learning may help teachers feel more capable of managing classroom responsibilities.

Nevertheless, the modest association and low reported explained variance for self-efficacy mean that other factors are likely to contribute to teachers' efficacy beliefs.

### 5.3. Teacher self-efficacy and partial mediation

Teacher self-efficacy had a strong positive association with job performance (β = .641) and a significant indirect effect in the mediation model. This pattern suggests that teachers' confidence in handling instructional tasks is an important correlate of their reported professional performance. The partial mediation result is also theoretically meaningful: instructional leadership may be associated with performance both through direct instructional support and through teachers' efficacy beliefs. This interpretation is consistent with Bandura's (1997) account of efficacy beliefs as a factor related to effort, persistence, and task performance, and with the teaching-specific efficacy framework of Tschannen-Moran and Hoy (2001). The data do not, however, establish the temporal sequence required for a causal mediation claim; longitudinal or experimental work would be needed to establish that sequence more firmly.

### 5.4. Leadership training: direct association but no significant moderation

Leadership training had a positive direct association with teacher job performance, but its interaction with instructional leadership was not statistically significant. The result does not support the expectation that the instructional leadership–performance association is stronger at higher levels of leadership training. This does not mean training is unimportant; rather, the present analysis did not demonstrate a statistically significant interaction. It is possible that training quality, content, duration, application, or follow-up support matter more than a general perceived training score, but these explanations were not directly tested and should be examined in future research.

### 5.5. Contextual and measurement considerations

The sample's composition also matters for interpretation. All respondents were male and worked in boys' schools, and more than three-fifths were from rural schools. The findings therefore provide useful evidence for this specific group but cannot automatically be generalized to female teachers or girls' schools. In addition, the use of self-reported measures for leadership, efficacy, training, and performance may introduce shared-method bias or social-desirability effects. The measurement model should also be fully reconciled with the final retained items before journal submission, as the thesis text contains different item counts in different measurement-model tables.

**Conclusion**

This study examined the relationship between instructional leadership practices and teacher job performance among 441 teachers in public secondary schools across five districts of Khyber Pakhtunkhwa. Instructional leadership was positively associated with job performance and teacher self-efficacy, while teacher self-efficacy showed a strong positive association with job performance. The significant indirect effect and remaining direct effect indicate partial mediation by teacher self-efficacy. Leadership training was positively associated with job performance, but the interaction term was not statistically significant; therefore, the proposed moderating effect was not supported. Overall, the findings support the value of examining both leadership practices and teachers' efficacy beliefs when studying teacher performance, while underscoring the need for stronger designs and clearer measurement verification in subsequent research.

**Policy and Practical Implications**

School heads may benefit from setting clear academic goals, communicating expectations, observing classroom teaching, monitoring student progress, and giving specific, constructive feedback. Such practices should be implemented as support for instructional improvement rather than as administrative compliance alone. Schools can also strengthen teacher self-efficacy by providing mentoring, peer collaboration, opportunities to practise new strategies, and feedback that helps teachers recognize and address areas for development.

For education authorities and leadership-development providers, the positive main association between leadership training and job performance supports continued attention to school-head development. However, because moderation was not significant, policy claims should not assume that training automatically amplifies the effects of instructional leadership. Training programmes should be evaluated for their content and practical impact and may be strengthened through school-based coaching, follow-up support, and evidence of changes in leadership practice. These recommendations are practical implications rather than effects directly tested by the present study.

**Limitations and Future Research**

Several limitations should be considered. First, the cross-sectional design does not establish temporal order or causality. Second, all variables were assessed through teacher reports, creating the possibility of shared method and response bias. Third, the final sample consisted entirely of male teachers in boys' schools, which limits generalizability. Fourth, the study covered five districts within one province and may not represent other Pakistani regions or private schools. Fifth, leadership training was assessed through perceptions rather than independently verified records of training participation. Finally, the final CFA specification and the reported reliability and validity values must be checked for consistency before publication.

Future studies should use longitudinal or multi-wave designs, combine teacher reports with classroom observations and school records, include female teachers and a wider range of school types, and verify training participation through programme records. Researchers may also examine training quality, coaching, school climate, teacher motivation, and other contextual factors as potential mediators or moderators. Replication in additional districts and provinces would help establish how broadly the present findings apply.

**Declarations**

Funding: This research received no external funding.

Conflict of Interest: The authors declare no conflict of interest.

Informed Consent: Data were collected online through Google Forms. Participation was voluntary, and teachers submitted their responses willingly. The authors should confirm whether an explicit informed-consent statement was displayed before questionnaire submission.

Ethics Approval: The research synopsis was approved by Kohat University of Science and Technology (KUST), Kohat, Pakistan. Whether separate ethics committee approval or exemption was granted should be confirmed with the university before submission.

Data Availability: An anonymized dataset may be made available upon reasonable request, subject to participant confidentiality and applicable institutional requirements.

Author Contributions: Ashraf Javed contributed to the research design, data collection, data analysis, interpretation of findings, and manuscript preparation. Dr. Mudassir Hussain contributed through research supervision, academic guidance, and manuscript development, subject to confirmation by both authors. Both authors approved the final manuscript and accept responsibility for their contributions.

**References**

Bandura, A. (1997). Self-efficacy: The exercise of control. W. H. Freeman.

Hallinger, P. (2011). Leadership for learning: Lessons from 40 years of empirical research. Journal of Educational Administration, 49(2), 125–142.

Hallinger, P., & Murphy, J. (1985). Assessing the instructional management behavior of principals. The Elementary School Journal, 86(2), 217–247.

Hallinger, P., & Wang, W.-C. (2015). Assessing instructional leadership with the Principal Instructional Management Rating Scale. Springer.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). Multivariate data analysis (8th ed.). Cengage.

Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. School Leadership & Management, 40(1), 5–22.

Nasim, F., Khurshid, K., Akhtar, S., & Kousar, F. (2023). Connecting the dot: Understanding the link between secondary school heads' leadership styles and teacher performance. Pakistan Journal of Humanities and Social Sciences, 11(2), 1643–1651.

Robinson, V. M. J., Lloyd, C. A., & Rowe, K. J. (2008). The impact of leadership on student outcomes: An analysis of the differential effects of leadership types. Educational Administration Quarterly, 44(5), 635–674.

Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. Teaching and Teacher Education, 17(7), 783–805.

Yamane, T. (1967). Statistics: An introductory analysis (2nd ed.). Harper and Row.