

The Impact of Head Teacher Leadership Effectiveness on Student Academic Achievement at the Elementary Level

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Tahira Sadiqi

Ph. D Scholar, Department of Education, Govt. College University, Faisalabad, Pakistan.

Email: tahirasadiqi491@gmail.com

Muhammad Ansar Abbas

Ph. D Scholar, Department of Education, Govt. College University, Faisalabad, Pakistan.

Email: ansarbharwana@gmail.com

Muhammad Asif Sial

M.Phil. Education, Department of Education, University of Jhang, Pakistan.

Email: asifsial92@gmail.com

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Abstract

This quantitative study investigated the effectiveness of head teacher performance as a leader on students' academic achievement at the elementary level in public schools of District Jhang, Pakistan. The objectives were; to examine head teachers' perceptions of their leadership effectiveness, determine its relationship with student achievement, and compare the effects of gender on leadership effectiveness. A descriptive research design was employed, utilizing a stratified random sampling technique to select 133 head teachers (65 male, 68 female). Data was collected via a five-point Likert scale questionnaire and analyzed using mean, standard deviation, t-tests, and Pearson's correlation in SPSS. The findings revealed that head teachers perceived their leadership positively across planning, organizing, supervision, motivation, co-curricular activities, and school management. A significant and moderate positive correlation was found between overall leadership effectiveness and student academic achievement ($r = .740, p < .01$). While some gender-based differences in perceptions were noted in specific leadership domains (e.g., planning, organizing), no significant difference was found in the overall leadership effectiveness between male and female head teachers. The study concludes that effective leadership by head teachers is a crucial factor in enhancing student outcomes. Recommendations include providing regular leadership training for head teachers, improving school infrastructure, and implementing a system of rewards and recognition to foster leadership effectiveness.

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Keywords: Head teacher, leadership effectiveness, academic achievement, elementary level, quantitative study

Introduction

Educational institutions are profoundly shaped by organizational leadership. Effective leadership possesses the transformative capacity to alter existing circumstances within an organization, driving improvement and success (Muchinsky, 2006). In the context of education, the school head teacher stands as a pivotal figure, responsible for steering the institution towards its academic goals. Leadership, defined as the ability to influence and direct individuals or groups toward common objectives (Zafar et al., 2023; Shahzadi et al., 2023; Hussain & Khoso, 2021; Ashkanasy et al., 2002), is not merely about enforcement but about empowering team members to fulfill their duties creatively and with a sense of personal accomplishment.

The academic performance of students, signifying the extent to which a student, teacher, or institution achieves its educational goals (Bunce et al., 2017), is the ultimate benchmark of an educational system's success. While teachers directly influence student learning, the head teacher's leadership sets the tone, culture, and conditions for effective teaching and learning to occur. Research by Marzano et al. (2005) indicates a correlation between school leadership and student achievement, often mediated through factors like school environment, teacher satisfaction, and instructional quality. The head teacher's role is, therefore, not a direct one but operates by creating a conducive environment that fosters academic excellence (Ahmad et al., 2023; 2024; Altaf et al., 2023; Dehraj & Hussain, 2024; Hussain et al., 2023; 2024; Muhammad et al., 2023; Sindhu et al., 2023; Leithwood et al., 2004).

Despite the recognized importance of leadership, a gap exists in understanding the specific perceptions of head teachers regarding their own effectiveness and its direct correlation with student outcomes, particularly in the context of Pakistani elementary public schools. This study aims to bridge this gap by exploring the effectiveness of head teacher performance as a leader on students' academic achievement at the elementary level in District Jhang, Pakistan.

Theoretical Framework

The study was underpinned by several prominent leadership theories that inform the role of a school head teacher.

- **Transformational Leadership:** This theory emphasizes leaders who inspire and motivate followers to achieve superior results by raising their awareness of the importance of outcomes and by activating their higher-order needs (Greenleaf, 2002). In schools, transformational head teachers articulate a shared vision, foster commitment, and emphasize collaboration.
- **Path-Goal Theory:** This model suggests that a leader's effectiveness is contingent on their ability to clarify the path for subordinates to achieve their goals (House & Mitchell, 1974). Head teachers can adopt directive, supportive, participative, or achievement-oriented behaviors depending on the needs of their staff and the task at hand, thereby enhancing teacher motivation and performance.
- **Servant Leadership:** This philosophy posits that the leader's primary role is to serve their followers, prioritizing their well-being and growth (Oxford University Press, USA, 2012).

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A servant head teacher focuses on the needs of teachers and students, fostering a supportive and ethical school community.

These theories collectively suggest that effective head teachers are those who can inspire, support, and clear obstacles for their staff, ultimately creating an environment where teachers can thrive and students can achieve their academic potential.

Methodology

Research Design and Sample

This study employed a quantitative, descriptive research design. The population consisted of all head teachers of public elementary schools in District Jhang. A stratified random sampling technique was used to ensure representation across gender. The sample was divided into two strata (male and female), and a proportionate sampling method was applied, resulting in a final sample of 133 head teachers (65 male and 68 female).

Instrument and Data Collection

Data was collected using a self-developed questionnaire. The instrument was divided into two sections:

1. **Demographic Information:** Including data on gender, age, experience, and school location.
2. **Leadership Effectiveness:** Comprising close-ended statements measured on a five-point Likert scale (Strongly Disagree to Strongly Agree). This section assessed leadership across six domains: Planning, Organizing, Supervision, Motivation, Co-curricular Activities, and School Management. Student academic achievement was measured using the average PEC exam results for 8th-grade students from 2015-2018.

The validity of the instrument was established through expert opinion, and its reliability was confirmed using Cronbach's alpha.

Data Analysis

The collected data was analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics (mean, standard deviation) were used to describe head teachers' perceptions. An independent samples t-test was conducted to compare leadership effectiveness based on gender. Pearson's product-moment correlation coefficient was calculated to determine the relationship between leadership effectiveness and student academic achievement.

Results

Head Teachers' Perceptions of Leadership Effectiveness

The analysis of head teachers' perceptions across the six leadership domains revealed an overall positive tendency.

- **Planning:** Head teachers reported strong control over the academic schedule (M=4.5) and ability to plan effectively (Overall M=4.36).
- **Organizing:** Respondents agreed they distributed workload and assigned job descriptions (M=4.19), though matching the right person to the right job was slightly less strong (M=3.83). The overall mean for organizing was 3.89.

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- **Supervision:** Head teachers actively provided counseling and result-oriented guidance (M=4.22) and conducted classroom visits (M=4.06). The overall mean for supervision was 3.93.
- **Motivation:** Promotion and increments were seen as strong motivators (M=4.14, M=4.12), but awards were perceived as less motivating (M=3.01). The overall mean for motivation was 3.77.
- **Co-curricular Activities:** Support for quiz competitions was high (M=4.1), but support for debates was lower (M=2.92). The overall mean was 3.6.
- **School Management:** Head teachers reported good infrastructure, including playgrounds (M=4.35) and water facilities (M=4.3), though building infrastructure was rated lower (M=3.01). The overall mean was 3.89.

Effect of Gender on Leadership Effectiveness

The t-test analysis revealed mixed results regarding the effect of gender. Significant differences ($p < .05$) in perceptions were found between male and female head teachers in the domain of Planning ($t=3.418$, $p=.001$), with females showing a higher standard deviation. However, no statistically significant differences were found in other individual domains such as Organizing ($p=.89$), Supervision ($p=.97$), Motivation ($p=.45$), Co-curricular Activities ($p=.45$), and School Management ($p=.79$). Crucially, the analysis of **Overall Leadership Effectiveness** showed no significant difference between male and female head teachers ($t=1.995$, $p=.84$).

Relationship between Leadership Effectiveness and Academic Achievement

Pearson's correlation analysis revealed a significant, positive, and moderate to strong relationship between all domains of leadership effectiveness and student academic achievement. The results are summarized in Table 1.

Table 1: Correlation between Leadership Effectiveness and Academic Achievement

Leadership Domain	Pearson *r*	p-value
Planning	.680	.000
Organizing	.752	.000
Supervision	.796	.000
Motivation	.539	.000
Co-curricular Activities	.310	.000
School Management	.751	.000

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Leadership Domain	Pearson *r*	p-value
Overall Effectiveness	.740	.000

All correlations are significant at the 0.01 level (2-tailed).

As shown in Table, the highest correlation was found for Supervision ($r = .796$), followed closely by Organizing ($r = .752$) and School Management ($r = .751$). The correlation for the overall leadership effectiveness was .740, indicating a strong positive relationship with student academic achievement.

Discussion

The findings of this study affirm the critical role of head teacher leadership in fostering student academic success at the elementary level. The positive perceptions of head teachers across all leadership domains suggest a self-awareness of their responsibilities and a commitment to their roles. The strong correlation between leadership effectiveness and academic achievement aligns with existing literature, which posits that effective school leaders indirectly influence student learning by shaping the school environment and supporting teacher effectiveness (Hallinger & Heck, 1998; Leithwood et al., 2004).

The domain of Supervision showed the strongest link to achievement, underscoring the importance of active, instructional leadership—such as classroom visits, modeling lessons, and staff mentoring—in improving teaching practices and, consequently, student outcomes. The strong correlations for Organizing and School Management highlight that operational efficiency and a safe, well-resourced learning environment are foundational to academic success.

The minimal impact of gender on overall leadership effectiveness is an encouraging finding, suggesting that leadership capability is not gender-specific. The isolated difference in the planning domain warrants further qualitative investigation but does not detract from the overall conclusion that both male and female head teachers are equally effective in their leadership roles.

The weaker, though still significant, correlation for co-curricular activities and motivation (specifically through awards) suggests areas for policy intervention. Head teachers may benefit from training on leveraging intrinsic motivation and more fully integrating co-curricular activities as a core component of the educational experience.

Conclusion and Recommendations

This study concludes that the performance of head teachers as leaders is a significant determinant of student academic achievement at the elementary level. Effective leadership, characterized by strong planning, organization, supervision, and school management, creates a ripple effect that positively influences the entire teaching and learning process. The study found no meaningful difference in the overall leadership effectiveness of male and female head teachers.

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Based on these conclusions, the following recommendations are proposed:

1. **Professional Development:** Education departments should institute regular, mandatory leadership training programs for head teachers, focusing on instructional supervision, motivational strategies, and strategic planning.
2. **Resource Allocation:** Policymakers should ensure that elementary schools are equipped with adequate infrastructure, including proper buildings, playgrounds, and sanitation facilities, to enable effective leadership and learning.
3. **Performance and Recognition:** A system of performance-based rewards and recognition for head teachers should be developed to acknowledge and incentivize effective leadership practices.
4. **Promotion of Co-curricular Activities:** Head teachers should be encouraged and supported to integrate co-curricular activities more deeply into the school curriculum, recognizing their role in holistic student development.

Future Research

Future studies could employ a mixed-methods approach to gain deeper insights into the qualitative aspects of head teachers' leadership experiences. Research could also be expanded to other districts and to the secondary school level to compare leadership dynamics. Furthermore, investigating the specific leadership behaviors that most directly impact teacher efficacy could provide valuable insights for targeted training programs.

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