

Impact of Instructional Leadership and Transformational Leadership on Teachers' Performance in Special and Inclusive Education Institutions in Bangladesh

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Abstract

This study examines the impact of instructional leadership and transformational leadership on teachers' performance in special and inclusive education institutions in Bangladesh. In the context of increasing diversity in classrooms and growing demand for inclusive education, effective leadership plays a critical role in enhancing teachers' performance and institutional effectiveness. The study focuses on two key leadership approaches-Instructional Leadership (ITL) and Transformational Leadership (TFL)-and evaluates their influence on Teachers' Performance (TCP). A quantitative research approach was adopted, using a structured questionnaire to collect primary data from 568 teachers working in special and inclusive education institutions across Bangladesh. The data were analyzed using SPSS, employing descriptive statistics, reliability analysis, exploratory factor analysis, and multiple regression analysis to test the proposed hypotheses. The findings reveal that both instructional leadership and transformational leadership have a positive and statistically significant impact on teachers' performance. Instructional leadership demonstrates a stronger influence ($\beta = 0.506$, $t = 13.908$, $p < 0.001$), indicating that practices such as instructional supervision, curriculum coordination, and academic guidance play a crucial role in enhancing teaching effectiveness. Transformational leadership also shows a significant positive effect ($\beta = 0.345$, $t = 8.982$, $p < 0.001$), highlighting the importance of motivation, vision, and individualized support in improving teachers' performance. The model explains 58.2% of the variance in teachers' performance ($R^2 = 0.582$), suggesting a strong explanatory power. The study contributes to existing literature by providing empirical evidence from a developing country context, particularly within special and inclusive education institutions where research remains limited. The findings offer practical implications for educational leaders, policymakers, and administrators to adopt a balanced leadership approach that integrates both instructional and transformational practices. Such integration can significantly enhance teachers' performance and support the effective implementation of inclusive education in Bangladesh.

Keywords: Instructional leadership, Transformational leadership, Teachers' performance, Special education, Inclusive education.

1. Introduction

Leadership is universally recognized as a central force shaping organizational effectiveness, employee performance, and long-term sustainability across sectors, including education (Northouse, 2021; Bush, 2018). In educational institutions,

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leadership extends beyond administrative coordination to influence instructional quality, teacher motivation, professional commitment, and institutional culture (Hallinger, 2011; Leithwood et al., 2020). Effective leadership is therefore indispensable for ensuring that educational goals are translated into meaningful teaching and learning practices.

In recent years, education systems worldwide have undergone significant transformation driven by globalization, accountability demands, technological change, and increasing diversity among learners (OECD, 2019; UNESCO, 2020). These changes have placed heightened expectations on teachers, particularly in special and inclusive education settings, where educators are required to address diverse learning needs, implement differentiated instruction, and collaborate with multidisciplinary teams. In such environments, leadership practices that support instructional improvement and inspire professional commitment are critical for sustaining teachers' performance and institutional effectiveness.

1.1 Background of the Study

Educational leadership has evolved toward approaches that emphasize instructional quality, teacher development, and organizational effectiveness (Bush & Glover, 2014; Hallinger, 2011). Instructional leadership focuses on academic goals, curriculum coordination, and instructional supervision (Hallinger & Murphy, 1985), while transformational leadership promotes shared vision, motivation, and innovation (Bass, 1990; Leithwood & Jantzi, 2006). These approaches are particularly relevant in special and inclusive education, where diverse learner needs require individualized planning and collaboration (Friend & Cook, 2017). Despite Bangladesh's policy commitments to inclusive education (Government of Bangladesh, 2010; UNESCO, 2017), challenges persist in teacher preparedness and leadership effectiveness (Ahsan & Sharma, 2018; Khan & Rahman, 2021). Therefore, examining both leadership styles is essential to understanding teachers' performance in special and inclusive educational institutions.

1.2 Explanation of Key Terminologies

1.2.1 Instructional Leadership

Instructional leadership focuses on improving teaching and learning through clear academic goals, instructional supervision, curriculum coordination, learning assessment, and teachers' professional development (Hallinger, 2011; Hallinger & Murphy, 1985). In special and inclusive education, it is particularly important for supporting differentiated instruction, individualized education planning, and monitoring learner progress. Effective instructional leadership enables teachers to address diverse learning needs, strengthen instructional practices, and improve teaching effectiveness.

1.2.2 Transformational Leadership

Transformational leadership emphasizes inspiring and motivating followers to achieve shared organizational goals through vision, commitment, and innovation (Bass, 1990). It involves building trust, encouraging intellectual stimulation, and providing individualized support to strengthen teachers' motivation and professional engagement (Bass & Riggio, 2006). In educational settings, transformational leadership promotes collaboration,

teacher empowerment, and organizational change (Leithwood & Jantzi, 2006). These practices are particularly relevant in special and inclusive education, where innovation and continuous adaptation are essential to address diverse learner needs.

1.2.3 Special Education

Special education refers to educational programs and services designed to address the unique learning needs of students with disabilities or special educational needs (Friend & Cook, 2017). It involves individualized instructional planning, specialized teaching methods, and coordinated support services aimed at maximizing learners' academic and social development. Teachers in special education contexts require strong professional support and leadership guidance to manage complex instructional demands effectively.

1.2.4 Inclusive Education

Inclusive education is an educational approach that promotes the participation and achievement of all learners, regardless of disability or background, within mainstream or integrated educational environments (UNESCO, 2020). It emphasizes equity, accessibility, and the removal of barriers to learning through adaptive instruction and supportive school cultures. Successful inclusive education depends heavily on leadership practices that coordinate resources, support teachers, and sustain inclusive values across the institution.

1.3 Problem of the Study

Teachers' performance is a key determinant of educational quality and institutional effectiveness (OECD, 2019). In special and inclusive education, it involves instructional planning, differentiated teaching, assessment, classroom management, and collaboration. However, teachers often face challenges related to workload, instructional complexity, and insufficient leadership support (Sharma & Deppeler, 2018). In Bangladesh, gaps in instructional supervision, professional mentoring, and leadership practices may further constrain teachers' performance (Ahsan, 2019; Bush & Glover, 2014). Despite the importance of leadership in educational effectiveness, limited empirical research has examined the combined influence of instructional and transformational leadership on teachers' performance in special and inclusive educational institutions in Bangladesh. Addressing this gap is essential for developing evidence-based leadership practices and improving educational quality in these settings.

1.4 Research Questions

From the above arguments, the study seeks to address the following two research questions:

- a. Does instructional leadership impact on teachers' performance in special and inclusive education institutions in Bangladesh?
- b. How does transformational leadership influence on teachers' performance in special and inclusive education institutions in Bangladesh?

1.5 Research Objectives

On the basis of above mentioned research questions, this study has design two research objectives. The objectives are as follows:

- a. To investigate the impact of instructional leadership on teachers' performance in special and inclusive education institutions in Bangladesh.
- b. To examine the impact of transformational leadership on teachers' performance in special and inclusive education institutions in Bangladesh.

1.6 Significance of the Study

Academically, this study contributes to leadership literature by extending empirical research on instructional and transformational leadership within special and inclusive education contexts in a developing country setting. Practically, the findings provide school leaders, administrators, and policymakers with evidence-based insights into leadership practices that enhance teachers' performance. The study may inform leadership training programs, institutional management strategies, and policy initiatives aimed at strengthening inclusive education implementation in Bangladesh.

1.7 Research Variables

The study examines three key variables:

- **Instructional Leadership:** Leadership practices related to instructional supervision, curriculum alignment, and the development of supportive learning environments (Munna, A. S. (2023).
- **Transformational Leadership:** Leadership practices related to vision building, motivation, innovation, and change management (Adeoye et al., 2025).
- **Teachers' Performance:** Teachers' effectiveness in lesson planning, instructional delivery, assessment, organization of learning activities, and quality of instructional outcomes (Tawa et al., 2024).

2. Literature Review

2.1 Inclusive Education System

An inclusive education system ensures equitable access to quality education for all learners, regardless of their abilities, disabilities, or backgrounds, within mainstream educational settings (Ahsan & Burnip, 2007). It promotes participation, respects diversity, and addresses barriers to learning through adapted teaching methods, flexible curricula, and accessible school environments (Ahmmmed & Mullick, 2014; Sahani & Patel, 2023). Ultimately, inclusive education aims to create supportive and non-discriminatory learning environments where every learner can participate, learn, and achieve their full potential.

2.2 Importance of Inclusive Education in Bangladesh

Inclusive education is essential in Bangladesh for ensuring equitable learning opportunities for children with disabilities, ethnic minorities, and other marginalized

groups (Ahsan & Mullick, 2013). It aligns with the country's commitment to universal education and Sustainable Development Goal 4 (Quality Education). However, poverty, social stigma, and inadequate accessibility continue to create barriers to educational participation (Begum et al., 2019). Inclusive education can help address these challenges by promoting equitable access, social inclusion, and respect for diversity. Furthermore, it encourages child-centered teaching, strengthens teachers' professional capacity, and supports curriculum flexibility. By reducing educational inequalities and expanding learning opportunities, inclusive education can contribute to human capital development, poverty reduction, and sustainable development in Bangladesh (Anis, 2023).

2.3 Economic Contribution of Inclusive Education System

Inclusive education contributes to economic development by strengthening human capital, expanding employment opportunities, and promoting the economic participation of persons with disabilities and marginalized groups (OECD, 2022; Paul Mary, 2023). It can improve educational attainment, social inclusion, and employment outcomes while reducing long-term dependence on public support (Taylor et al., 2020; Malhotra, 2024). By developing relevant skills and promoting inclusive workplace practices, it also facilitates the transition from education to employment (Merrigan & Senior, 2021; Jackson et al., 2024). Furthermore, inclusive education supports the objectives of the UN Convention on the Rights of Persons with Disabilities and SDGs 4 and 8 (Ambika & Sheeja Vayola, 2023). Assistive technologies and artificial intelligence may further reduce learning barriers and enhance participation, positioning inclusive education as a potential contributor to sustainable economic and social development (Tah et al., 2024).

2.4 Instructional Leadership Theory

Instructional Leadership Theory emphasizes the role of school leaders in improving teaching and learning through clear academic goals, curriculum coordination, instructional supervision, and continuous professional development. By providing constructive feedback, strengthening teachers' pedagogical skills, and fostering a collaborative learning environment, instructional leaders enhance teaching effectiveness and accountability. The theory suggests that a sustained focus on instructional quality improves teachers' performance and student outcomes.

2.5 Transformational Leadership Theory

Transformational leadership theory explains how leaders inspire and motivate followers to achieve higher performance and professional growth. It comprises four key dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. By establishing a shared vision, encouraging innovation, and addressing teachers' individual needs, transformational leaders foster motivation, job satisfaction, and professional development. These mechanisms can enhance teachers' performance and commitment to continuous improvement.

2.6 Theories and Performance

Instructional and transformational leadership theories provide complementary

frameworks for explaining teachers' performance. Instructional leadership emphasizes academic goal setting, instructional supervision, curriculum coordination, and professional development to enhance teaching effectiveness (Wahab et al., 2020). In contrast, transformational leadership focuses on inspiring teachers through a shared vision, individualized support, and professional motivation, thereby promoting commitment, innovation, and continuous improvement (Iman & Veronica, 2025). Integrating these approaches may strengthen teachers' performance by combining instructional guidance with motivational support. Accordingly, the present study considers both leadership styles as complementary influences on teachers' performance in inclusive educational institutions.

2.7 Theory and Hypothesis Development

2.7.1 Teacher Performance

Teachers' performance refers to the effectiveness with which teachers carry out their instructional and professional responsibilities in the school setting (Andriani et al., 2018). It encompasses lesson planning, instructional delivery, classroom management, assessment practices, and student engagement (Wahab et al., 2020). High levels of teachers' performance are reflected in the ability to use appropriate teaching strategies to meet diverse learners' needs. Teachers' performance is also influenced by professional commitment, continuous learning, and collaboration with colleagues. Overall, effective teachers' performance contributes significantly to improved student learning outcomes and overall school effectiveness.

2.7.2 Instructional Leadership

Instructional leadership refers to the practices of school leaders that are focused on improving teaching and learning processes. It emphasizes setting clear academic goals, managing the instructional program, and supervising classroom instruction (Wahab et al., 2020). Instructional leaders support teachers through guidance, feedback, and professional development opportunities (Soroño and Quirap, 2023). The concept also highlights the creation of a positive school climate that promotes high expectations and continuous improvement. Through these practices, instructional leadership directly influences the quality of instruction and teachers' performance.

2.7.3 Transformational Leadership

Transformational leadership is a leadership approach that focuses on inspiring and motivating followers to achieve higher levels of performance and personal growth. It is characterized by four core components: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Hay, 2006). Transformational leaders articulate a clear and compelling vision that encourages commitment and shared purpose among teachers. They promote creativity and critical thinking by encouraging teachers to explore new ideas and innovative instructional practices (Andriani et al., 2018). By recognizing individual needs and providing support, transformational leaders enhance teachers' job satisfaction and professional development. Consequently, transformational leadership positively influences teachers' performance and long-term school improvement.

2.8 Instructional Leadership and Teachers' Performance

Instructional leadership can enhance teachers' performance by establishing clear instructional goals, providing professional support, monitoring teaching practices, and promoting continuous development (Zahed-Babelan et al., 2019). Previous empirical studies have demonstrated a positive association between instructional leadership and teachers' performance across different educational contexts (Wahab et al., 2020; Soroño & Quirap, 2023). Furthermore, Elfira et al. (2024) found that principals' instructional leadership positively influenced both teachers' self-efficacy and performance, while Demirdag (2021) reported a positive relationship between instructional leadership and teachers' motivation. These findings suggest that effective instructional leadership contributes to improved teaching effectiveness and professional outcomes. Based on the theoretical and empirical evidence, the following hypothesis is proposed:

H₁: Instructional leadership is positively and significantly associated with teachers' performance

2.9 Transformational Leadership and Teachers' Performance

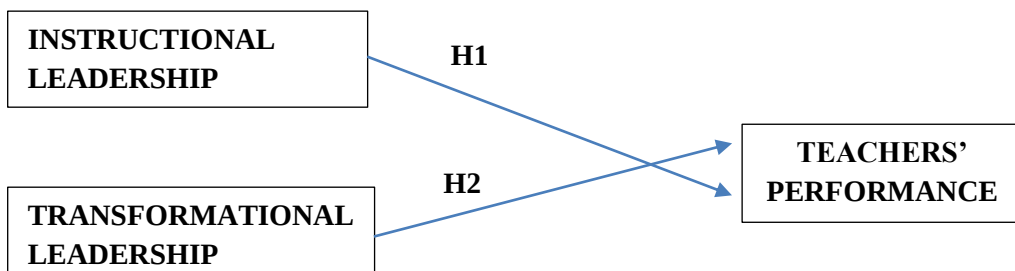
Transformational leadership is expected to enhance teachers' performance by fostering motivation, commitment, job satisfaction, professional growth, and innovation (Mahmudah et al., 2020). Previous studies have reported a positive and significant relationship between transformational leadership and teachers' performance, highlighting the roles of individualized support, shared vision, intellectual stimulation, and a supportive work climate (Nurrisayani et al., 2024; Karjuni, 2024; Iman & Veronica, 2025). These findings suggest that transformational leaders can improve teaching effectiveness, collaboration, and instructional practices. Based on this theoretical and empirical evidence, the following hypothesis is proposed:

H₂: Transformational leadership is positively and significantly associated with teachers' performance

2.10 Conceptual Framework

Figure 1

Instructional, Transformational leadership and Teachers' Performance



2.11 Research Gap

Although previous studies have linked instructional and transformational leadership to teachers' performance across different countries (Abdullah et al., 2018; Ahmad et al., 2019; Gunawan & Adha, 2021; Soroño & Quirap, 2023), evidence regarding their combined effects remains limited, particularly in inclusive educational settings in developing countries (Kefallinou et al., 2020; Ahmed & Islam, 2026). Building on earlier research highlighting their complementary roles (Marks & Printy, 2003; Kwan, 2020), this study examines their combined influence on teachers' performance in inclusive educational institutions in Bangladesh.

3. Research Methodology

3.1 Research Design

This study employed a quantitative research design to examine the relationships between instructional leadership, transformational leadership, and teachers' performance in special and inclusive educational institutions in Bangladesh. Primary data were collected through a structured questionnaire administered to teachers. The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, factor analysis, and regression analysis were employed to summarize respondent characteristics, assess the measurement structure, and examine the hypothesized relationships among the study variables.

3.2 Population and Study Setting

The study population comprised teachers working in special and inclusive educational institutions in Bangladesh. Ten institutions were selected from the database of the Department of Social Services, Ministry of Social Welfare, and Bangladesh. These institutions constituted the study setting for investigating the relationships between leadership practices and teachers' performance.

3.3 Sampling Technique and Sample Size

A non-probability convenience sampling technique was employed to recruit teachers who were accessible and willing to participate. Data were collected through an online questionnaire distributed using Google Forms. A total of 750 questionnaires were distributed, yielding 584 completed responses. After excluding 16 invalid or incomplete responses, 568 valid questionnaires were retained for analysis. The final sample size was therefore 568 teachers. Although convenience sampling facilitated data collection across the participating institutions, the non-random selection of respondents may limit the generalizability of the findings beyond the study setting.

3.4 Data Analysis

The data were coded, screened, and analyzed using SPSS. Descriptive statistics were used to summarize respondents' demographic characteristics and the principal study variables. Factor analysis was conducted to examine the underlying structure of the measurement items and assess construct validity. Multiple regression analysis was subsequently employed to estimate the relationships of instructional leadership and

transformational leadership with teachers' performance. The analyses were designed to test the study hypotheses and evaluate the proposed relationships among the variables.

3.5 Research Instrument Development

A structured questionnaire using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) measured three constructs: instructional leadership (six items), transformational leadership (six items), and teachers' performance (seven items). Items were adapted from Gunawan and Adha (2021), Alrowwad et al. (2020), and Kadiyono et al. (2020).

3.6 Questionnaire Design and Validation

The questionnaire comprised demographic information (Part A) and measurement items for the three study constructs (Part B). Content validity was assessed by two academics and two inclusive education practitioners.

3.7 Data Collection

Questionnaires were distributed online via Google Forms to teachers in inclusive educational institutions across Dhaka Division. Of the 750 questionnaires distributed, 584 responses were received, and 568 valid responses were retained after excluding 16 invalid responses.

3.8 Data Analysis

Data were analyzed using IBM SPSS Statistics, version 27. Frequency distributions, descriptive statistics, reliability analysis, factor analysis, and regression analysis were employed to examine the study variables and test the hypotheses.

3.9 Ethical Considerations

The study emphasized informed consent, voluntary participation, confidentiality, and anonymity (Kombo & Tromp, 2006; Yin, 2011). Participants were informed about the study's purpose, and their responses were used solely for research purposes.

4. Data Analysis and Findings

The data analysis examines the relationships between Instructional Leadership (ITL), Transformational Leadership (TFL), and Teachers' Performance (TCP) in inclusive educational institutions in Bangladesh. Descriptive statistics, reliability analysis, factor analysis, and multiple regression analysis were conducted using SPSS. Regression analysis was used to test the hypotheses and determine the direction, strength, and statistical significance of the relationships between the independent and dependent variables.

4.1 Demographic Analysis

Table 1

Gender Group

Group	Frequency	Percent
Male	198	34.9
Female	370	65.1

Total	568	100.0
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Author's calculation

In the Gender frequency table 1, we can see the percentage analysis of group set. We are seeing 34.9 percent of the sample is male, and 65.1 percentage of sample is female. It means the respondents are mostly female than male in this research.

Table 2

Age Group

Age of Respondent	Frequency	Percent
Less than 40 years	350	61.5
41-45 years	139	24.5
46-50 years	52	9.2
More than 50 years	27	4.8
Total	568	100.0

In the age group frequency table 2, we can see the percentage of group set. We see that 61.5 percent of sample is (Less than 40 years) which is the highest number of percentages of this frequency. The age group 41-45 years is the second highest with 24.5 percentage of this frequency table. The age group 46-50 years is the third highest with 9.2 percent of this frequency table. However, only 4.8 percent of the respondents are in the age group above 50 years in the table.

Table 3

Education Level

Education Level	Frequency	Percent
Bachelor/BA/BBA/BSc	268	47.2
Master/MA/MBA/MSc	238	41.9
Professional Degree	60	10.6
Doctorate/PhD	2	0.4
Total	568	100.0

In the Education Level group table 3, we can see that 47.2 percent of sample has Bachelor/BA/BBA/BSc degree which is the highest number of percentages of this frequency table while 41.9 percentage of sample have Masters/MA/MBA/MSc or higher degree which is the second highest percentage of this frequency table. 10.6 percent of sample possesses Professional Degrees while only 0.4 percent of sample has PhD Degree which is lowest percentage of this frequency table.

Table 4*Working Experience*

Working Experience	Frequency	Percent
Less than 5 years	212	37.3
6-10 years	163	28.7
11-15 years	101	17.8
More than 16 years	92	16.2
Total	568	100.0

Author's calculation

In the work experience frequency table 4, we can see the percentage of work experience. We can see that 37.3 percent of the sample has less than 5 years of working experience which is the highest number in this frequency level while 28.7 percent of the sample has 6-10 years of working experience. 17.8 percent of the sample has 11-15 years of experience and only 16.2 percentage of the sample has more than 16 years of experience which is the lowest in this frequency table 4

Table 5*Type of Employment*

Type of Employment	Frequency	Percent
Permanent	546	96.1
Part Time	9	1.6
Contractual	7	1.2
Others	6	1.1
Total	568	100.0

In the Type of Employment Table 5, we can see that 96.1 percent of the employees are full-time permanent in nature while only 1.6 percent are Part Time Employee. Only 1.2 percent employees are contractual and 1.1 percent falls in others categories which is the lowest percentage in this frequency table 5

Table 6*Age of Institute*

Age of Institute	Frequency	Percent
Less than 5 years	100	17.6

6-10 years	68	12.0
11-15 years	79	13.9
More than 16 years	321	56.5
Total	568	100.0

In the Age of Institute Table 6, we can see that only 17.6 percent falls in the category of Less than 5 years while 12 percent is within 6-10 years which is the lowest. Only 13.9 percent of sample is within 11-15 years while 56.5 percent is above 16 years which is the highest percent in this frequency table.

Table 7

Institution Size (Employee Numbers)

Institution Size	Frequency	Percent
Less than 50 employees	48	8.45
51-100 employees	34	5.98
101-150 employees	17	2.99
More than 151 employees	469	82.57
Total	568	100.0

In the above frequency table 7, we can see the percentage of institution size. We are seeing that 82.57 percent of sample is (More than 151 employees) which is the highest number while only 2.99 percent falls with 101-150 employees category which is the lowest of this frequency table. 8.45 percent of sample is (Less than 50 employees) while only 5.98 percent falls within (51-100 employees) which is the third highest in this frequency table.

4.2 Descriptive Analysis

Table 8

ITL=Instructional Leadership

Code	Mean	Std. Deviation
ITL1	4.13	.641
ITL2	4.06	.660
ITL3	4.02	.740
TIL4	4.09	.732
ITL5	4.03	.677
ITL6	4.04	.677

In table 8 presents a summary of the means and the standard deviation for the Six items of ITL, highest standard deviation is .740 and lowest is .641. Here highest mean is 4.13 and the lowest is 4.02.

Table 9

TFL=Transformational Leadership

Code	Mean	Std. Deviation
TFL1	3.97	.657
TFL2	4.06	.661
TFL3	4.02	.620
TFL4	3.97	.693
TFL5	4.02	.662
TFL6	3.92	.654

The table 9 presents a summary of the means and the standard deviation for the six items of Soft TFL, highest standard deviation is .693 and lowest is .620. Here highest mean is 4.06 and lowest mean is 3.92.

Table 10

TCP=Teachers' Performance

Code	Mean	Std. Deviation
TCP1	4.17	.679
TCP2	4.09	.675
TCP3	4.14	.660
TCP4	4.08	.653
TCP5	4.14	.666
TCP6	4.03	.663
TCP7	4.12	.694

In Table 10 presents a summary of the means and the standard deviation for the six items of TCP, highest standard deviation is .694 and lowest is .653. Here highest mean is 4.17 and lowest mean is 4.03.

4.3 Reliability Analysis

Cronbach's alpha measures internal consistency, which is, how closely related a set of items are. It is a measure of scale reliability. Many scholars recommended a minimum alpha coefficient. Hair et al. (2017), Cronbach alpha (CA) value is greater than .60 are

considered good; CA value greater than .70 are considered very good; and finally, if CA are .80 or greater, they are considered excellent. Here, all constructs CA values are greater than 0.80 which confirms an excellent internal consistency.

Table 11

Reliability

Variable Name	Items No	Cronbach Alpha (CA)
Instructional Leadership (ITL)	6	0.844
Transformational Leadership (TFL)	6	0.837
Teachers' Performance (TCP)	7	0.885

The accepted value of Cronbach Alpha/CA is 0.60-0.70. So, CA values of all variables are accepted.

4.4 Factor Analysis

Factor analysis was conducted using SPSS to assess the validity of the measurement constructs. Principal Component Analysis (PCA) with varimax rotation was used to examine the factor structure and assess convergent validity (Tong & Hawley, 2009). Factor loadings indicate the strength of the relationship between each item and its corresponding factor. Loadings above 0.40 are generally considered important, while those exceeding 0.50 are considered significant (Sharma, 1996). The analysis identified three constructs: Instructional Leadership (ITL), Transformational Leadership (TFL), and Teachers' Performance (TCP). ITL item loadings ranged from 0.640 to 0.740, TFL loadings from 0.620 to 0.693, and TCP loadings from 0.653 to 0.679. All items exceeded the 0.50 threshold, supporting the factor structure and providing evidence of convergent validity.

4.4.1 KMO (Kaiser-Meyer-Olkin)

The KMO acceptable value level is 0.50, if the KMO value level is above 0.50 then the result is not accepted. In this factor analysis we are seeing that the KMO level is 0.944 (Daud et al., 2019), which is higher than the acceptable level. So, we can accept the KMO result.

4.4.2 Cumulative Variance Explained

The variance explained by factor analysis should not be maximum of 100% but is should not be less than 60%. In this factor analysis the cumulative variance is 60.581%. So, we can accept this cumulative variance as it is well ahead of the accepted value. However, acceptable thresholds depend on sample size (Hair et al., 2017).

4.5 Regression Analysis

Regression analysis is a set of statistical methods used for the estimation of relationships between a dependent variable and one or more independent variables. It can be utilized to

assess the strength of the relationship between variables and for modeling the future relationship between them. The most common models are simple linear.

Table 12

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.763 ^a	.582	.580	.33411

Author's calculation: Predictors: (Constant), ITL, TFL

SPSS allows specifying multiple models in a single regression command. This tells the number of the model being reported.

R: The model yielded an R value of 0.763, indicating a strong correlation between the observed and predicted values of teachers' performance (TCP).

R-Square (R²): The R² value of 0.582 indicates that instructional leadership (ITL) and transformational leadership (TFL) jointly explain 58.2% of the variance in teachers' performance.

Adjusted R-Square: The adjusted R² value was 0.580, slightly lower than the R² value of 0.582, indicating minimal adjustment for the number of predictors and a relatively stable model fit.

Standard Error of the Estimate: The standard error of the estimate represents the average prediction error of the regression model, with smaller values indicating greater predictive accuracy.

Table 13

Results of ANOVA Test

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	87.806	2	43.903	393.292	0.001 ^b
Residual	63.070	565	.112		
Total	150.876	567			

a. Dependent Variable, TCP; b. Predictors: (Constant), ITL, TFL

Table 14

Path Coefficient Result

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	β	Std. Error	Beta		
Constant	0.680	0.124		5.473	0.001
ITL	0.506	0.036	0.506	13.908	0.001
TFL	0.345	0.038	0.327	8.982	0.001

a. *Dependent Variable: TCP*

Table 15

Test of Hypothesis

No	Hypothesis	β -value	t-value	p-value	Decision
H ₁	ITL->TCP	0.506	13.904	0.001	Accepted
H ₂	TFL->TCP	0.345	8.982	0.001	Accepted

Note: $p < 0.05$; $p < 0.001$; $t > 1.96$

Here, the acceptable value of significance level is 0.05. If significance level is greater than 0.05 the hypothesis is rejected, if significance level is less than 0.05 the hypothesis accepted.

H₁: Instructional leadership (ITL) has a positive and significant effect on teachers' performance (TCP) ($\beta = 0.506$, $t = 13.908$, $p < .001$). Therefore, H₁ is accepted.

H₂: Transformational leadership (TFL) has a positive and significant effect on teachers' performance (TCP) ($\beta = 0.327$, $t = 8.982$, $p < .001$). Therefore, H₂ is accepted.

Both hypotheses are accepted, as the relationships are statistically significant at the 5% significance level. Neither hypothesis is rejected.

5. Discussion and Implications

5.1 Discussion

This study examined the effects of instructional leadership (ITL) and transformational leadership (TFL) on teachers' performance (TCP) in inclusive educational institutions in Bangladesh.

Research Objective I: To examine the impact of instructional leadership on teachers' performance.

The findings support H₁, demonstrating a positive and statistically significant effect of instructional leadership on teachers' performance ($\beta = 0.506$, $t = 13.908$, $p < .001$). This result is consistent with Wahab et al. (2020) and Saleem et al. (2020), who reported significant associations between instructional leadership and performance. However,

Heaven and Bourne (2016) found that instructional leadership explained only 1.4% of the variance in students' academic performance, suggesting that its effects may vary across educational contexts and outcome measures.

Research Objective II: To examine the effect of transformational leadership on teachers' performance.

The findings support H_2 , indicating that transformational leadership has a positive and statistically significant effect on teachers' performance ($\beta = 0.327$, $t = 8.982$, $p < .001$). This finding is consistent with Mahmudah et al. (2020), Alzoraiki et al. (2023), and Andriani et al. (2018), who reported positive associations between transformational leadership and performance. However, the result differs from Zhao (2023), which reported inconsistent findings concerning transformational leadership and teachers' turnover intention. This difference may reflect variations in research contexts and outcome variables.

Overall, both leadership styles significantly influence teachers' performance, with instructional leadership demonstrating a stronger effect than transformational leadership. These findings highlight the importance of effective instructional guidance and inspirational leadership in supporting teacher performance in inclusive educational institutions in Bangladesh.

5.2.1 Theoretical Implications

The findings align with transformational and instructional leadership theories. Burns (1978) suggests that transformational leadership motivates followers through a shared vision and collective commitment, while Bass (1985) emphasizes intellectual stimulation and individualized consideration in enhancing employee effectiveness. Similarly, Hallinger (2015) highlights the role of instructional leadership in improving teaching practices through instructional supervision and curriculum coordination. Previous studies have examined leadership in relation to firm performance (Agazu et al., 2025), school performance (Oco, 2022), and higher education performance (Khan et al., 2023). However, limited research has specifically addressed teachers' performance in special and inclusive education institutions. This study contributes to the literature by examining both leadership styles in this underexplored context in Bangladesh, responding to calls for further research on leadership and teachers' performance in emerging contexts (Wahab et al., 2020; Saleem et al., 2020; Zhao, 2023).

5.2.2 Managerial Implications

Leaders of inclusive educational institutions should strengthen instructional leadership through regular classroom supervision, constructive feedback, clear curriculum objectives, and continuous professional development. Student performance data should inform instructional improvements and inclusive teaching practices. Additionally, transformational leadership should be promoted through shared vision, teacher recognition, individualized support, and collaborative decision-making. Integrating both leadership approaches may improve teachers' performance and strengthen institutional effectiveness in inclusive education.

5.2.3 Academic Implications

Teacher education curricula in Bangladesh should incorporate instructional and transformational leadership principles to strengthen teaching effectiveness in inclusive educational settings. Training programs should emphasize inclusive pedagogical strategies, curriculum adaptation, continuous assessment, and evidence-based instructional practices. Incorporating collaborative learning, peer support, teacher motivation, and leadership development may further enhance teachers' professional competencies. Aligning professional development with inclusive education objectives can support sustained improvements in teaching quality and educational outcomes.

5.3 Limitations of the Study

This study has several limitations. First, it adopted a quantitative approach and focused exclusively on instructional and transformational leadership, although other factors may influence teachers' performance. Second, convenience sampling within inclusive educational institutions in the Dhaka division may limit the generalizability of the findings. Future research could employ probability sampling across multiple regions of Bangladesh and use mixed-method approaches to enhance the depth and robustness of the findings. Third, time and resource constraints may have restricted the study's scope. Finally, respondents' reluctance to share information and limited availability due to professional responsibilities may have affected data collection and response quality. Future studies should address these challenges through broader sampling, improved respondent engagement, and more comprehensive research designs.

5.4 Future Research Direction

Future research should use larger, probability-based samples covering multiple divisions of Bangladesh to improve the generalizability of the findings. Researchers could also examine mediating and moderating variables, such as organizational support and institutional culture, to explore the mechanisms and contextual factors influencing the relationship between leadership and teachers' performance. Furthermore, incorporating additional leadership styles, including transactional and democratic leadership, would provide a more comprehensive understanding of teachers' performance in inclusive educational institutions. Finally, mixed-method approaches could offer deeper insights into leadership practices and their influence on teacher effectiveness across diverse educational settings.

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