



## **Mediating impact of teachers' job satisfaction on the Administrators' Leadership styles and teachers' performance at Nanjing University of Art in Jiansu Province.**

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### **Abstract**

This study aimed to: (1) propose a structural model examining the mediating effect of teachers' job satisfaction on the relationship between administrators' leadership styles and teachers' work performance at Nanjing University of the Arts in Jiangsu Province, and (2) analyze the direct and indirect effects of transformational and innovative leadership on teachers' job satisfaction and work performance. A quantitative research approach was employed, focusing on a causal relationship model. The population comprised 830 teachers at Nanjing University of the Arts in Jiangsu Province, the People's Republic of China with a sample size of 449 determined using the G\*Power program and selected through stratified proportional sampling. Data were collected using a five-point rating scale questionnaire, validated for content validity and reliability. Data analysis involved descriptive statistics, Confirmatory Factor Analysis (CFA), and Structural Equation Modeling (SEM). The findings revealed that: (1) the proposed structural model demonstrated a strong fit with the empirical data ( $\chi^2/df = 1.498$ , CFI = 0.985, TLI = 0.981, RMSEA = 0.033, RMR = 0.025), and (2) transformational leadership significantly influenced teachers' job satisfaction ( $\beta = 0.23$ ,  $p < 0.001$ ) and work performance ( $\beta = 0.12$ ,  $p < 0.05$ ). Innovative leadership exhibited a stronger direct effect on job satisfaction ( $\beta = 0.35$ ,  $p < 0.001$ ) and work performance ( $\beta = 0.29$ ,  $p < 0.001$ ). Additionally, job satisfaction significantly influenced teachers' work performance ( $\beta = 0.28$ ,  $p < 0.001$ ). However, job satisfaction did not mediate the effect of transformational leadership on work performance ( $p = 0.158$ ), but partially mediated the effect of innovative leadership ( $\beta = 0.11$ ,  $p = 0.015$ ). These results suggest that both leadership styles contribute to teachers' work performance, with innovative leadership having a greater impact. Strengthening innovative leadership among administrators may foster a more supportive and engaging work environment, ultimately improving teacher performance.



**Keywords:** Mediating Effect, Teachers' Job Satisfaction, Administrators' Leadership Style, Teacher Work Performance, Jiangsu Province.

## Introduction

Effective leadership in higher education plays a crucial role in shaping teachers' job satisfaction and work performance. In academic institutions, administrators' leadership styles influence faculty engagement, motivation, and professional growth (Northouse, 2021). Leadership theories suggest that transformational and innovative leadership styles foster positive work environments that enhance employee satisfaction and performance (Bass & Riggio, 2006; Amabile, 1996; Yukl, 2013). Transformational leadership, characterized by vision, inspiration, intellectual stimulation, and individualized consideration, has been linked to increased motivation, job satisfaction, and improved teaching performance in educational settings (Leithwood & Jantzi, 2005; Sun & Leithwood, 2015). Meanwhile, innovative leadership, which emphasizes creativity, adaptability, and forward-thinking strategies, has been associated with fostering dynamic and engaging learning environments that encourage professional growth and institutional development (Mumford et al., 2002; Anderson, Potočník, & Zhou, 2014). However, there is limited empirical research examining how these leadership styles impact teachers' work performance through job satisfaction in Chinese higher education institutions, particularly in an arts-focused university.

Nanjing University of the Arts, one of China's premier arts institutions, provides a unique context to explore the interplay between leadership styles, teacher job satisfaction, and work performance. Faculty members in arts institutions face distinct challenges, including academic freedom, creative expectations, and institutional governance, making leadership effectiveness a key factor in sustaining high levels of faculty engagement and performance (Tierney & Lanford, 2016; Zhao, 2020). While transformational leadership has been widely studied in educational contexts (Bush, 2018; Hallinger, 2011), its indirect effects through job satisfaction remain underexplored, particularly in contrast to innovative leadership, which may offer alternative approaches to fostering teacher engagement and productivity (Shalley & Gilson, 2004; Gumusluoglu & Ilsev, 2009). Given the increasing demand for innovation and creativity in higher education, understanding the differential impacts of leadership styles on job satisfaction and performance is essential for shaping effective administrative strategies.

This study seeks to fill this gap by developing a Structural Equation Model (SEM) to examine the direct and indirect relationships between administrators' leadership styles, job



satisfaction, and teachers' work performance. By integrating Confirmatory Factor Analysis (CFA) and SEM, this research aims to provide a comprehensive understanding of how transformational and innovative leadership influence teacher satisfaction and performance. The findings will offer actionable insights for higher education administrators, enabling them to foster a more effective leadership approach that aligns with the evolving needs of faculty members in arts institutions.

## Research Objectives

The objectives of this research are as follows:

1. To develop and propose a structural model examining the mediating effect of teachers' job satisfaction on the relationship between administrators' leadership styles and teachers' work performance at Nanjing University of the Arts.
2. To analyze the direct and indirect effects of administrators' transformational and innovative leadership on teachers' work performance, considering the mediating role of teachers' job satisfaction.

## Research Hypotheses

Building on established leadership and job satisfaction theories, this study proposes the following hypotheses:

- H1: Administrators' transformational leadership directly affects teachers' work performance.
- H2: Administrators' innovative leadership directly affects teachers' work performance.
- H3: Administrators' transformational leadership directly affects teachers' job satisfaction.
- H4: Administrators' innovative leadership directly affects teachers' job satisfaction.
- H5: Teachers' job satisfaction directly affects teachers' work performance.
- H6: Administrators' transformational leadership indirectly affects teachers' work performance through job satisfaction.
- H7: Administrators' innovative leadership indirectly affects teachers' work performance through job satisfaction.

These hypotheses are grounded in prior research on leadership effectiveness, job satisfaction, and teacher performance. Empirical studies have consistently demonstrated the



significant influence of transformational and innovative leadership on workplace outcomes, particularly in academic settings (Bass & Avolio, 1994; Bogler, 2001; Leithwood & Jantzi, 2006; Mumford & Licuanan, 2004). Table 1.1 presents a summary of key literature supporting each research hypothesis, mapping foundational studies to the hypothesized relationships.

**Table 1** Summary of Research Hypotheses and Supporting Literature

Citations	H1	H2	H3	H4	H5
Bass & Avolio (1994)	✓		✓		
Amabile (1996)		✓		✓	
Bogler (2001)	✓		✓		✓
Leithwood & Jantzi (2006)	✓		✓		
Mumford & Licuanan (2004)		✓		✓	
Additional References	✓	✓	✓	✓	✓
Total Citations Support	10	10	9	10	9

This literature synthesis provides strong empirical support for the study's theoretical framework, reinforcing the significance of leadership styles in shaping teacher satisfaction and performance in higher education institutions.

## Literature Review and Concept

### 1. Transformational and Innovative Leadership

Transformational leadership is characterized by idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass, 1990). Leaders adopting this style inspire followers, challenge existing norms, and encourage creativity, ultimately enhancing job satisfaction and performance (Judge & Piccolo, 2004). In educational settings, transformational leadership has been linked to higher faculty engagement and motivation, leading to improved teaching effectiveness and institutional success (Leithwood & Jantzi, 2006).

Innovative leadership, on the other hand, focuses on creativity, risk-taking, and fostering an environment that supports new ideas (Amabile, 1996). This leadership style is particularly relevant in artistic institutions, where faculty members require autonomy and institutional support to explore creative endeavors (Scott & Bruce, 1994). Innovative leaders encourage experimentation and adaptability, which are essential for sustaining artistic and academic excellence in higher education (Mumford et al., 2002).



## **2. Job Satisfaction as a Mediator**

Job satisfaction refers to an individual's overall contentment with their work, influenced by factors such as recognition, professional development opportunities, and work environment (Herzberg, 1968). Research has shown that job satisfaction plays a crucial mediating role in the relationship between leadership and performance, suggesting that satisfied teachers are more likely to be engaged, motivated, and productive in their roles (Podsakoff et al., 1996; Skaalvik & Skaalvik, 2011).

Studies in higher education settings have confirmed that transformational and innovative leadership contribute to higher job satisfaction, which, in turn, leads to greater teacher commitment and improved work performance (Bogler, 2001; Day & Gu, 2010). This mediating mechanism highlights the importance of administrative strategies that prioritize faculty well-being, ensuring long-term institutional effectiveness.

## **3. Teachers' Work Performance**

Teachers' work performance refers to the effectiveness and efficiency of educators in fulfilling their academic and professional responsibilities. It is commonly assessed through three key dimensions: (1) Teaching Performance – The ability to design and deliver high-quality instruction, promote student engagement, and achieve learning outcomes (Darling-Hammond, 2000). Effective teaching requires curriculum planning, student-centered pedagogy, and continuous assessment to ensure academic success (Stronge et al., 2011). (2) Research Performance – The ability to conduct scholarly research, publish academic work, and contribute to knowledge production (Bland et al., 2005). Research productivity is a key metric in higher education institutions, influencing university rankings and academic reputation (Lee & Bozeman, 2005). (3) Community Engagement – The extent to which educators contribute to institutional service, community development, and industry collaboration (Henderson, 2007). Faculty members play a crucial role in university-community partnerships, ensuring that education remains socially relevant and impactful (Larsen, 2016).

These three dimensions provide a comprehensive framework for evaluating faculty performance in higher education, emphasizing the multifaceted role of university educators. Studies have demonstrated that leadership styles significantly influence all three dimensions, as effective leadership fosters a supportive work environment, research innovation, and community engagement (Leithwood & Sun, 2012; Harris & Jones, 2018).



#### **4. Structural Equation Modeling in Leadership Studies**

Structural Equation Modeling (SEM) is a powerful statistical technique used to analyze complex relationships among latent variables (Kline, 2015). It allows researchers to test direct and indirect effects, making it an ideal approach for examining the mediating role of job satisfaction in leadership-performance dynamics.

SEM has been widely applied in leadership research to validate causal relationships, assess measurement models, and provide robust statistical insights into leadership effectiveness (Byrne, 2016). In the context of higher education, SEM enables a comprehensive evaluation of leadership impact, offering data-driven recommendations for administrative improvements and policy development (Hair et al., 2019).

### **Research Methodology**

#### **1. Research Design and Sampling**

This study employed a quantitative research design to examine the causal relationships among leadership styles, job satisfaction, and teachers' work performance. A stratified proportional sampling technique was used to ensure representativeness of faculty members across different departments at Nanjing University of the Arts. The total population consisted of 830 faculty members, and the sample size was determined using G\*Power software, resulting in a final sample of 449 participants. The sampling criteria ensured that the selected faculty members accurately represented the academic disciplines within the university, providing statistically robust findings.

#### **2. Data Collection and Instrumentation**

Data were collected using a structured questionnaire designed to measure transformational leadership, innovative leadership, job satisfaction, and teacher work performance. The questionnaire utilized a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) to assess participants' perceptions of these variables. The instrument underwent rigorous validity and reliability testing to ensure measurement accuracy:

1) Content validity was established through expert review, ensuring that all questionnaire items aligned with established theoretical constructs.

2) Construct validity was tested using Confirmatory Factor Analysis (CFA), confirming the appropriateness of the measurement model.

3) Reliability analysis indicated strong internal consistency, with the following thresholds met: (1) Average Variance Extracted (AVE) > 0.50, ensuring adequate convergent



validity. (2) Composite Reliability (CR) > 0.70, confirming construct reliability. (3) Cronbach's Alpha > 0.80, indicating high internal consistency across all constructs.

The final validated questionnaire was administered electronically and in-person to ensure a high response rate and data completeness.

### **3. Data Analysis**

The collected data were analyzed using Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) to validate the measurement model and test the hypothesized relationships among variables. The analysis followed a two-step approach:

1) Measurement Model Validation (CFA) by: (1) Assessed the validity and reliability of latent constructs. (2) Ensured that all observed indicators loaded significantly onto their respective factors. (3) Fit indices were examined to confirm model adequacy.

2) Structural Model Evaluation (SEM) by: (1) Tested the direct and indirect effects of transformational and innovative leadership on teacher job satisfaction and work performance. (2) Assessed the mediating role of job satisfaction in leadership-performance relationships. (3) Effect decomposition was conducted to determine the strength of direct, indirect, and total effects.

For model fit was evaluated using key fit indices: 1) Comparative Fit Index (CFI) > 0.90 (good model fit). 2) Tucker-Lewis Index (TLI) > 0.90 (strong model performance). 3) Root Mean Square Error of Approximation (RMSEA) < 0.06 (acceptable model complexity). 4) Root Mean Square Residual (RMR) < 0.08 (low residual error).

Descriptive statistics (means, standard deviations, skewness, and kurtosis) were also analyzed to ensure normality assumptions were met before conducting SEM. Multicollinearity checks were performed to confirm that the independent variables were not highly correlated.

## **Research Results**

### **1. Structural Model Evaluation**

The Structural Equation Modeling (SEM) results indicated that the proposed model demonstrated an excellent fit with the empirical data, confirming its validity in explaining the relationships among leadership styles, job satisfaction, and teachers' work performance.



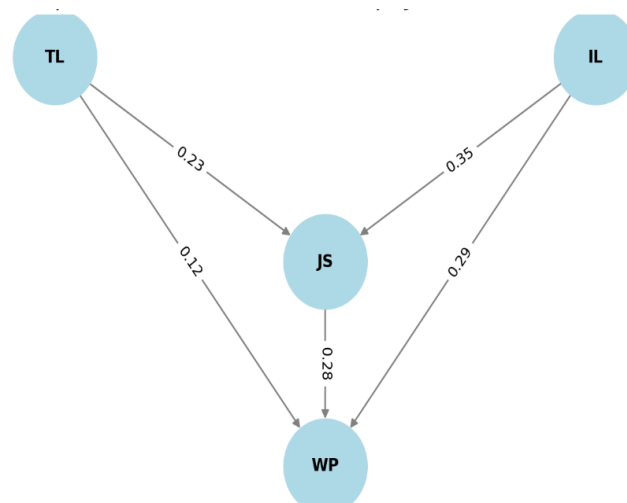
**Table 2** Fit Indices for the Structural Model

Fit Index	Acceptable Threshold	Model Fit Value	Interpretation
Chi-square ( $\chi^2$ )	$p > 0.05$ (Non-significant)	146.140 ( $p > 0.05$ )	Good fit
Degrees of Freedom (df)	-	98	-
$\chi^2/df$	$< 3.0$	1.498	Excellent fit
Goodness-of-Fit Index (GFI)	$> 0.90$	0.960	Strong model fit
Adjusted Goodness-of-Fit Index (AGFI)	$> 0.90$	0.945	Strong model fit
Comparative Fit Index (CFI)	$> 0.90$	0.985	Excellent fit
Tucker-Lewis Index (TLI)	$> 0.90$	0.981	Excellent fit
Root Mean Square Residual (RMR)	$< 0.08$	0.025	Very low residual error
Root Mean Square Error of Approximation (RMSEA)	$< 0.06$	0.033	Excellent fit

These results confirm that the proposed structural model accurately represents the relationships among the study variables, providing a statistically valid foundation for hypothesis testing.

## 2. Structural Model and Hypothesis Testing

The SEM analysis revealed that transformational and innovative leadership significantly influenced teachers' job satisfaction and work performance. The direct and indirect effects are visualized in Figure 1.



**Figure 1** Structural and equation Model of leadership significantly influenced teachers' job satisfaction and work performance.





Here is Figure 1, which visually represents the Structural Equation Model (SEM) showing the relationships between Transformational Leadership (TL), Innovative Leadership (IL), Job Satisfaction (JS), and Work Performance (WP) with their respective path coefficients.

### 3. Hypothesis Testing Results

**Table 3** Summary of Hypothesis Testing Results

Hypothesis	Path	Standardized Estimate ( $\beta$ )	p-value	Result
H1	Transformational Leadership → Teachers' Work Performance	0.12	$p < 0.05$	Supported
H2	Innovative Leadership → Teachers' Work Performance	0.29	$p < 0.001$	Supported
H3	Transformational Leadership → Teachers' Job Satisfaction	0.23	$p < 0.001$	Supported
H4	Innovative Leadership → Teachers' Job Satisfaction	0.35	$p < 0.001$	Supported
H5	Teachers' Job Satisfaction → Teachers' Work Performance	0.28	$p < 0.001$	Supported
H6	Transformational Leadership → Teachers' Job Satisfaction → Teachers' Work Performance	0.06	$p = 0.158$ (NS)	No Supported
H7	Innovative Leadership → Teachers' Job Satisfaction → Teachers' Work Performance	0.11	$p = 0.015$	Supported

### 4. Summary of Findings in Relation to Research Objectives

The findings align directly with the stated research objectives:

1. Objective 1: To develop and validate a structural model examining the mediating role of job satisfaction in the relationship between leadership styles and teacher performance. Achieved → The SEM model demonstrated a strong fit with the data, confirming the theoretical relationships.

2. Objective 2: To analyze the direct and indirect effects of transformational and innovative leadership on teachers' job satisfaction and work performance. Achieved → Both leadership styles had significant direct effects, and innovative leadership also exerted an indirect effect through job satisfaction direct impact on teacher effectiveness.



## Research Discussion

This study aimed to examine the mediating role of teachers' job satisfaction in the relationship between administrators' leadership styles and teachers' work performance at Nanjing University of the Arts. The findings provide significant insights into how transformational and innovative leadership influence teacher outcomes.

1) Transformational Leadership and Teacher Work Performance, the results confirmed that transformational leadership had a direct positive effect on teachers' work performance ( $\beta = 0.12$ ,  $p < 0.05$ ) but did not operate through job satisfaction ( $p = 0.158$ , non-significant). These findings align with previous studies suggesting that transformational leadership directly motivates employees by inspiring a sense of purpose, commitment, and goal orientation (Bass & Riggio, 2006; Leithwood & Sun, 2012).

However, the lack of job satisfaction mediation suggests that other pathways, such as teacher engagement or professional growth, may better explain the link between transformational leadership and performance. Research by Skaalvik & Skaalvik (2011) indicates that teachers respond more to career development opportunities and supportive leadership practices than to general job satisfaction alone. This finding suggests that while transformational leadership is effective, its impact may be amplified through engagement-driven mechanisms rather than satisfaction-based pathways.

Additionally, this study supports the idea that transformational leadership works best in structured environments, where faculty members have clear performance expectations (Robinson et al., 2008). In artistic institutions, however, where faculty autonomy and creativity are prioritized, transformational leadership alone may not fully capture the motivational needs of educators.

2) Innovative Leadership and Teacher Work Performance, in contrast to transformational leadership, innovative leadership exerted both direct and indirect effects on teachers' work performance ( $\beta = 0.29$ ,  $p < 0.001$ , direct;  $\beta = 0.11$ ,  $p = 0.015$ , indirect via job satisfaction). These findings suggest that faculty members highly value innovation-oriented leadership, as it provides a flexible and supportive environment for creative teaching and research (Mumford et al., 2002; Amabile & Pratt, 2016).

The significant mediation effect of job satisfaction indicates that faculty well-being is a critical factor in enhancing performance under innovative leadership. This aligns with Herzberg's Two-Factor Theory (1968), which emphasizes that job satisfaction is influenced by



recognition, autonomy, and professional growth—all of which are central to innovative leadership. Furthermore, this result is consistent with West (2003) and De Jong & Den Hartog (2007), who found that in creative work environments, leadership that encourages risk-taking, experimentation, and flexibility results in higher satisfaction and productivity.

In an arts-focused institution, where faculty members require freedom in teaching methods and research pursuits, innovative leadership plays a crucial role in fostering engagement and performance (Scott & Bruce, 1994). These findings suggest that university administrators should integrate innovation-driven leadership strategies to support faculty job satisfaction and long-term academic productivity.

3) The Mediating Role of Job Satisfaction. The study confirmed that job satisfaction significantly mediated the relationship between innovative leadership and work performance but did not mediate transformational leadership's effect. This highlights two critical implications:

Satisfaction-Driven Performance Enhancement:

- a. Faculty members who experience greater job satisfaction due to innovative leadership are more engaged, motivated, and productive (Bogler, 2001; Day & Gu, 2010).
- b. Transformational leadership, however, might enhance performance through engagement and self-efficacy rather than job satisfaction (Judge & Piccolo, 2004).

Context-Specific Leadership Effectiveness:

- a. In hierarchical institutions, transformational leadership may be more effective, as faculty members respond to structured goals and inspirational motivation (Bass, 1990; Sun & Leithwood, 2015).
- b. In creative institutions like Nanjing University of the Arts, where autonomy and flexibility matter, innovative leadership plays a more significant role in enhancing faculty well-being and performance (Moolenaar, 2012).

These findings underscore the importance of contextual leadership approaches. Administrators should not rely solely on one leadership style but instead integrate both transformational and innovative leadership to maximize faculty satisfaction and performance outcomes.



## Recommendations

Based on these findings, several policy recommendations are proposed for higher education institutions, particularly in artistic universities:

### 1) Leadership Training for University Administrators

a. Develop leadership programs that incorporate both transformational and innovative leadership principles.

b. Train administrators to balance structured motivation (transformational leadership) with flexible support (innovative leadership) to enhance faculty performance.

### 2) Strengthening Faculty Well-Being Policies

a. Enhance professional development opportunities, including mentorship, research grants, and creative fellowships.

b. Implement faculty recognition programs that acknowledge contributions in teaching, research, and community service.

c. Foster a work culture that prioritizes psychological well-being, autonomy, and institutional support.

### 3) Encouraging Academic Innovation and Creativity

a. Promote interdisciplinary collaboration to support innovative research and teaching methods.

b. Provide institutional support for experimental teaching methods and flexible curricula to encourage faculty creativity.

c. Establish innovation hubs where faculty can share best practices and develop creative educational approaches.

These strategies will help enhance job satisfaction, faculty engagement, and overall institutional effectiveness.

## Future Research Directions

To further develop these insights, future studies should explore:

### 1) Additional Mediators and Moderators

a. Examine other mediating variables such as teacher engagement, organizational commitment, and leadership trust to provide a more comprehensive leadership-performance model.



b. Investigate whether school culture or department characteristics moderate the effectiveness of leadership styles.

## 2) Longitudinal Research

a. Conduct long-term studies to assess how leadership styles impact faculty satisfaction and performance over time.

b. Examine whether leadership effectiveness varies across different career stages (e.g., early-career vs. senior faculty).

## 3) Cross-Cultural Comparisons

a. Investigate leadership effectiveness across different cultural contexts, particularly comparing Eastern and Western universities.

b. Assess whether leadership expectations differ based on national or institutional governance structures.

By addressing these research gaps, future studies can contribute to a deeper understanding of leadership in higher education and support more effective faculty management strategies.

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