



# Effect of Transformational Leadership and Organizational Justice Toward Teachers' Job Engagement as Mediated by Teachers' Job Satisfaction in Universities under Jiangxi Province

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## Abstract

The objectives of this study were (1) to develop a structural equation model (SEM) examining the effects of administrators' transformational leadership and organizational justice on teachers' job engagement, mediated by teachers' job satisfaction, and (2) to analyze the direct and indirect effects of these variables among university teachers in Jiangxi Province. A quantitative research design was employed. The sample consisted of 494 Chinese painting teachers selected through stratified random sampling from a population of 1,540 teachers across five universities in Jiangxi Province. Data were collected using a Likert-scale questionnaire and analyzed using descriptive statistics, confirmatory factor analysis (CFA), and structural equation modeling (SEM). The results indicated that the model, which included four latent variables: transformational leadership, organizational justice, job satisfaction, and job engagement, demonstrated good validity and fit with the empirical data. Transformational leadership, organizational justice, and job satisfaction all had significant direct positive effects on teachers' job engagement. Moreover, transformational leadership and organizational justice also exerted indirect effects on job engagement through job satisfaction.

**Keywords:** Transformational Leadership, Organizational Justice, Job Satisfaction, Job Engagement, Jiangxi Province



## Introduction

With the expansion of higher education, university management now faces significant challenges, particularly in leadership. Zhou, Worapongpat, Liuyue (2024). To navigate growing demands from society and educational reforms, universities require effective transformational leadership. The 2020 Report on the Development of Higher Education in China highlights persistent issues, including insufficient leadership and low organizational efficiency, that directly affect educational quality and institutional effectiveness (Avolio, & Bass, 1995).

Furthermore, research presented at the International Educational Society conference affirms the growing significance of transformational leadership and organizational justice in improving educational outcomes. Worapongpat (2025). A meta-analysis titled “Organizational Justice and Teacher Job Engagement” confirmed that organizational justice significantly affects teachers’ job engagement. In line with Bakker & Bal (2010). Transformational leadership is shown to enhance both job satisfaction and engagement, while Dongling. Worapongpat, (2023). Emphasized the strong relationship between organizational justice and employee engagement.

However, in the current Chinese university context, the mechanisms by which transformational leadership and organizational justice influence teachers’ job engagement remain underexplored, particularly with respect to the mediating role of job satisfaction. Xunan.L, Worapongpat (2023). Additionally, universities continue to grapple with structural challenges, such as unequal resource distribution and varying educational standards, which further complicate the cultivation of teacher engagement and morale. Elovainio, Kivimäki, & Helkama (2002).

Effective transformational leadership can foster enthusiasm, creativity, team cohesion, and collaboration among teachers. Worapongpat & Arunyakanon (2025). Meanwhile, organizational justice contributes to a fair and supportive work environment, enhancing teachers’ satisfaction and motivation (Fornell & Larcker, 1981). As noted by teacher engagement plays a key role in building productive learning environments, improving teaching quality, and fostering student development. JianFeng, Worapongpat (2024). Job engagement involves a teacher’s commitment, responsibility, and willingness to interact with students, all of which significantly influence instructional effectiveness and career satisfaction (Hakanen, Bakker, & Schaufeli, 2006).

Despite existing research on these individual constructs, few studies have integrated them into a comprehensive model to test their interrelationships using structural equation modeling (SEM), especially in the context of Chinese universities. This presents a crucial gap in the literature that this study seeks to fill. (Kahn, 1990).

This research, therefore, aims to explore the impact of transformational leadership and organizational justice on teachers’ job engagement, while examining the mediating role of job satisfaction. The findings are expected to support universities in Jiangxi Province in strengthening leadership practices, enhancing organizational fairness, and improving educational quality. In turn, this will contribute to sustainable educational development and broader economic and social progress in the region.

## Questions

1. How does the structural equation model (SEM) explain the influence of administrators’ transformational leadership and organizational justice on teachers’ job engagement, mediated by teachers’ job satisfaction in universities in Jiangxi Province?
2. To what extent do administrators’ transformational leadership and organizational justice have direct and indirect effects on teachers’ job engagement through teachers’ job satisfaction in universities in Jiangxi Province?

## Objectives

1. To develop a structural equation model (SEM) illustrating the effects of administrators’ transformational leadership and organizational justice on teachers’ job engagement, mediated by teachers’ job satisfaction in universities in Jiangxi Province.



2. To investigate the direct and indirect effects of administrators' transformational leadership, organizational justice, and teachers' job satisfaction on teachers' job engagement in universities in Jiangxi Province.

## Literature Reviews

### ***Transformational Leadership***

Transformational leadership, as defined, includes four dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. This leadership style enhances teachers' motivation, job satisfaction, and engagement (Smith, Kendall, & Hulin, 1985).

### ***Organizational Justice***

Organizational justice involves fairness in outcomes, processes, and interpersonal treatment. categorized it into distributive, procedural, interpersonal, and informational justice. High organizational justice increases job satisfaction and engagement (Spector, 1985).

### ***Job Satisfaction***

Job satisfaction refers to positive feelings toward one's job and work environment. Factors include compensation, promotion, supervision, and collegial relationships. It also acts as a mediator between leadership/justice and engagement (Worapongpat, 2022).

### ***Job Engagement***

Job engagement is defined as vigor, dedication, and absorption in one's work. Engaged teachers contribute to better teaching quality and student outcomes (Worapongpat & Petnacon, 2025).

### ***Relationships Among Variables***

Prior studies suggest that both transformational leadership and organizational justice positively influence job satisfaction and engagement, with job satisfaction mediating the relationship. However, integrated models tested in Chinese university contexts remain limited, justifying the present study. (Worapongpat & Kangpheng, 2025).

## Methodology

### ***Research Design***

This study employed a quantitative research design consisting of two phases:

Phase 1: A literature review was conducted to identify the key components of administrators' transformational leadership, organizational justice, teachers' job satisfaction, and teachers' job engagement.

Phase 2: A questionnaire was developed based on the constructs identified in Phase 1. After validating its content and reliability, the questionnaire was distributed to the sample. Data were analyzed using structural equation modeling (SEM) to examine both direct and mediating effects among variables.

### ***Population and Sample***

The population comprised 1,540 teachers from five public comprehensive universities in Jiangxi Province. Using G\*Power software ( $\alpha = 0.05$ , effect size = 0.3, power = 0.8), a minimum sample size of 449 participants was determined. Stratified random sampling was used to ensure representation across universities and disciplines.

### ***Research Instruments***

The main research instrument was a structured questionnaire, which included:

Part 1: Personal demographic data (checklist format)

Part 2: Items measuring transformational leadership, organizational justice, job satisfaction, and job engagement (5-point Likert scale)

Content validity was assessed using the Item-Objective Congruence (IOC) method, while reliability was evaluated using Cronbach's alpha coefficient.

### Data Analysis

Descriptive statistics (mean and standard deviation) and tests of normality were performed using SPSS. Confirmatory factor analysis (CFA) and structural equation modeling (SEM) were conducted using AMOS software to test construct validity and examine hypothesized relationships.

## Results

The descriptive statistics for latent and observed variables, including teachers' job engagement, administrators' transformational leadership, organizational justice, and teachers' job satisfaction, as perceived by 449 Chinese painting teachers at universities in Jiangxi Province, are presented in Table 1.

**Table 1** Descriptive Statistics Results and Normality Assessment (n = 449)

Variable List	$\bar{x}$	S.D.	Sk.	Ku.	Level
<b>Job Engagement</b>					
JE1	3.45	0.85	-0.44	-0.30	High
JE2	3.47	0.79	-0.18	-1.08	High
JE3	3.43	0.82	-0.09	-1.19	High
<b>Transformational Leadership</b>					
II	3.33	0.92	-0.36	-0.64	Moderate
IM	3.59	0.82	-0.35	-0.74	High
IS	3.39	0.87	-0.23	-0.82	Moderate
IC	3.50	0.88	-0.34	-0.86	High
<b>Organizational Justice</b>					
OJ1	3.40	0.87	-0.14	-0.96	Moderate
OJ2	3.37	0.89	-0.22	-0.84	Moderate
OJ3	3.46	0.83	-0.15	-1.01	High
OJ4	3.45	0.84	-0.11	-0.95	High
<b>Job Satisfaction</b>					
JS1	3.34	0.91	-0.28	-0.74	Moderate
JS2	3.41	0.84	-0.21	-0.69	High
JS3	3.36	0.93	-0.29	-0.87	Moderate
JS4	3.36	0.94	-0.11	-0.95	Moderate
JS5	3.43	0.96	-0.38	-0.76	High

JE1–JE3 represent the three dimensions of job engagement: Vigor, Dedication, and Absorption.

II, IM, IS, IC represent the four dimensions of transformational leadership: Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration.

OJ1–OJ4 represent the four dimensions of organizational justice: Procedural, Distributive, Interpersonal, and Informational Justice.

JS1–JS5 represent the five dimensions of job satisfaction: Job Description, Compensation, Opportunities and Advancement, Supervisor, and Colleagues.

The results indicated that the mean scores ranged from 3.33 to 3.59, suggesting moderate to high levels across the studied variables. The standard deviations (0.79–0.96) reflected acceptable variability, while skewness and kurtosis values were within  $\pm 2$ , confirming that the assumption of normality was satisfied (Kline, 2011; Hair et al., 2019).

### **Model Validity and Reliability Analysis**

Further analysis using Structural Equation Modeling (SEM) is recommended to assess model validity and reliability. A path diagram should be presented to illustrate the structural model, including standardized estimates for each path and the coefficient of determination ( $R^2$ ) for endogenous variables.

It is important to report whether the factor loadings are standardized or unstandardized. For interpretative clarity, standardized factor loadings are preferred as they allow direct comparison across constructs.

**Table 2** Convergent Validity: Composite Reliability (CR) and Average Variance Extracted (AVE)

Variable	Indicator	Estimate Factor Loading	S.E.	Z-test	p	CR	AVE
Teachers' Job Engagement (JE)	JE1	0.74	0.08	11.63	.00**	0.81	0.58
	JE2	0.78	0.08	14.08	.00**		
	JE3	0.77	0.08	13.96	.00**		
Administrators' Transformational Leadership (TL)	II	0.79	0.07	15.81	.00**	0.86	0.61
	IS	0.82	0.07	16.26	.00**		
	IM	0.75	0.06	15.05	.00**		
	IC	0.75	0.07	14.98	.00**		
Organizational Justice (OJ)	OJ4	0.79	0.06	17.32	.00**	0.85	0.59
	OJ3	0.78	0.06	16.61	.00**		
	OJ2	0.78	0.06	16.52	.00**		
	OJ1	0.73	0.06	15.42	.00**		
Teachers' Job Satisfaction (JS)	JS1	0.79	0.06	16.95	.00**	0.85	0.56
	JS2	0.70	0.06	15.17	.00**		
	JS3	0.74	0.06	15.87	.00**		
	JS4	0.80	0.06	17.53	.00**		
	JS5	0.72	0.06	15.61	.00**		
Variable	Indicator	Estimate Factor Loading	S.E.	Z-test	p	CR	AVE

**Note:** Significance levels: \*\*p < 0.01

The results in Table 2 indicated that all standardized factor loadings exceeded the recommended threshold of 0.50, and all Z-test values were statistically significant at  $p < 0.001$ . The AVE values ranged from 0.56 to 0.61, which are greater than the 0.50 cut-off, and the CR values ranged from 0.81 to 0.86, exceeding the 0.70 benchmark. These findings confirmed that each construct demonstrated strong convergent validity and composite reliability (Fornell & Larcker, 1981; Hair et al., 2019).

### **Research Objective 1**

To propose a Structural Equation Model (SEM) of administrators' transformational leadership and organizational justice affecting teachers' job engagement, mediated by teachers' job satisfaction, in universities in Jiangxi Province.

### **Research Objective 2**

The second research objective was to investigate the effects of administrators' transformational leadership, organizational justice, and teachers' job satisfaction on teachers' job engagement at universities in Jiangxi Province.

### **Direct Effects Analysis**

The path analysis of the SEM (including both CFA measurement model and structural path analysis) was conducted. The standardized factor loading values between each latent variable, along with their statistical details, are presented in Table 3.

**Table 3** Hypotheses Testing of Direct Effects

Path	Estimate	Std. Estimate	S.E.	Z-test	p-value
JE <--- TL	0.11	0.12	0.05	2.16	0.03*
JS <--- TL	0.25	0.23	0.06	4.22	0.00**
JE <--- OJ	0.26	0.29	0.05	4.78	0.00**
JS <--- OJ	0.38	0.35	0.06	6.26	0.00**
JE <--- JS	0.23	0.28	0.05	4.56	0.00**

**Note:** Significance levels: \* $p < 0.05$ , \*\* $p < 0.01$

The results in Table 3 indicated that administrators' transformational leadership (TL), organizational justice (OJ), and teachers' job satisfaction (JS) had statistically significant direct effects on teachers' job engagement (JE). Specifically:

**Hypothesis 1 (H1):** TL  $\rightarrow$  JE was supported ( $\beta = 0.12$ ,  $p < 0.05$ ).

**Hypothesis 2 (H2):** TL  $\rightarrow$  JS was supported ( $\beta = 0.23$ ,  $p < 0.001$ ).

**Hypothesis 3 (H3):** OJ  $\rightarrow$  JE was supported ( $\beta = 0.29$ ,  $p < 0.001$ ).

**Hypothesis 4 (H4):** OJ  $\rightarrow$  JS was supported ( $\beta = 0.35$ ,  $p < 0.001$ ).

**Hypothesis 5 (H5):** JS  $\rightarrow$  JE was supported ( $\beta = 0.28$ ,  $p < 0.001$ ).

Thus, all five hypotheses (H1–H5) were accepted, demonstrating that both transformational leadership and organizational justice directly enhance teachers' job engagement and also positively influence job satisfaction.

### **Mediation Analysis**

The mediating role of teachers' job satisfaction (JS) was further tested using bias-corrected bootstrapping. The results are shown in **Table 4**.

**Table 4** Mediating Effect of Teachers' Job Satisfaction in the SEM

Path	Estimate	95% Bias-Corrected CI
JE <--- JS <--- TL	0.11	[0.03, 0.21]
JE <--- JS <--- OJ	0.16	[0.05, 0.23]

The indirect effect of TL on JE through JS was 0.11, with a 95% confidence interval that did not include zero, indicating statistical significance. Therefore, **Hypothesis 6 (H6)** was accepted, confirming that transformational leadership indirectly influences job engagement via job satisfaction.

## Discussion

Results from Research Objective 1. Results from research objective 1 found that the proposed SEM demonstrated an excellent fit with the empirical data, with indices such as  $\chi^2/df = 1.498$ , GFI = 0.960, and CFI = 0.985, exceeding the recommended thresholds. Transformational leadership and organizational justice significantly influenced teachers' job engagement, both directly and indirectly via job satisfaction. This may be because transformational leaders enhance teachers' intrinsic motivation by providing intellectual stimulation and individualized support, while organizational justice fosters a sense of fairness and belonging in the workplace. This finding corresponds to Klassen, R. M., & Chiu, M. M. (2010). who emphasized that vigor, dedication, and absorption are enhanced in supportive organizational contexts, and to Pintong, A., & Worapongpat, N. (2024). who identified justice perceptions as a key antecedent of employee engagement.

Results from Research Objective 2: Results from research objective 2 found that all seven hypotheses (H1–H7) were accepted. Transformational leadership ( $\beta = 0.12$ ,  $p < 0.05$ ), organizational justice ( $\beta = 0.29$ ,  $p < 0.001$ ), and job satisfaction ( $\beta = 0.28$ ,  $p < 0.001$ ) had statistically significant direct effects on teachers' job engagement. In addition, job satisfaction mediated the effects of both transformational leadership and organizational justice on job engagement. This may be because teachers' job satisfaction acts as a psychological mechanism, translating perceptions of leadership and fairness into stronger emotional and cognitive engagement with work. This finding corresponds to Makjod, S., Worapongpat, N., Kangpheng, S., & Bhasabutr, P.. (2025). who argued that job resources (such as fair treatment and supportive leadership) are key drivers of engagement, and who highlighted the role of satisfaction in enhancing organizational outcomes.

Results from Research Objective 3 indicated that teachers' job satisfaction partially mediated the relationships among transformational leadership, organizational justice, and job engagement. This may be because, while satisfaction explains a substantial part of the relationship, other unobserved factors, such as organizational culture and professional development opportunities, may also contribute. This corresponds to Min.Y, Worapongpat, N. (2023). who posited that transformational leadership creates intrinsic motivation beyond satisfaction, and recent findings by Schaufeli, W. B., & Bakker, A. B. (2002), who demonstrated that multiple organizational and psychological variables influence engagement.

## Originality

From the study of "Effect of Transformational Leadership and Organizational Justice toward Teachers' Job Engagement as Mediated by Teachers' Job Satisfaction in Universities under Jiangxi Province", new knowledge was identified and summarized in the following conceptual diagram (Figure 1).

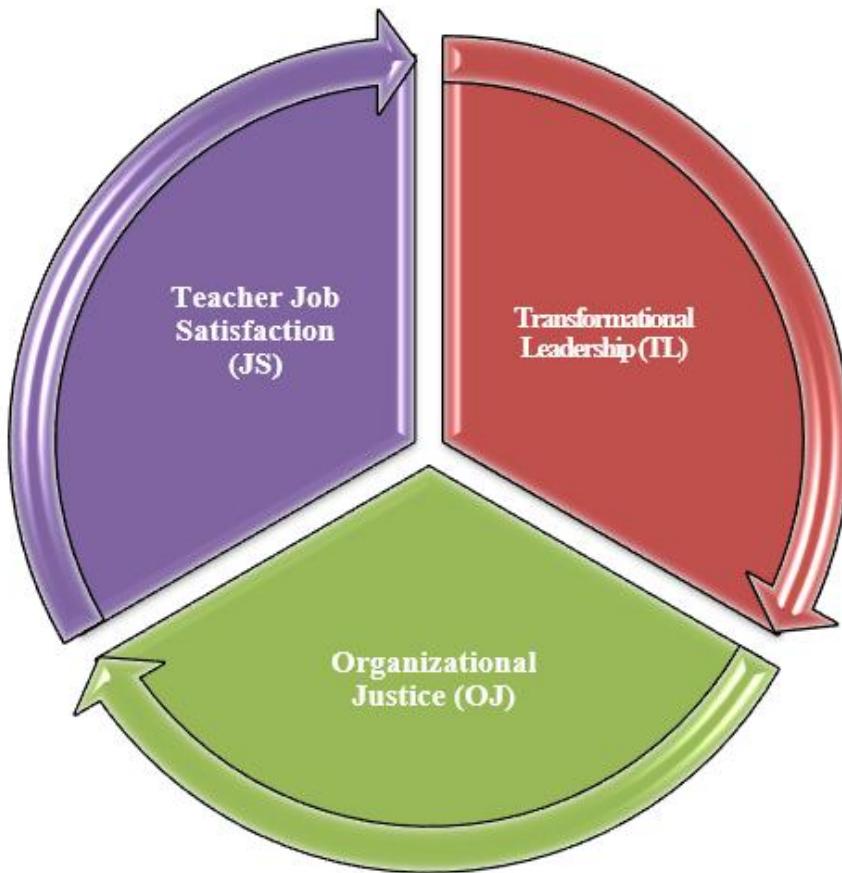


Figure 1 Originality from research

It illustrates the results of the Structural Equation Model (SEM), which explains the relationships among Transformational Leadership (TL), Organizational Justice (OJ), and Teachers' Job Satisfaction (JS), and their effects on Teachers' Job Engagement (JE) in universities in Jiangxi Province.

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