




International Journal of Learning, Teaching and Educational Research
Vol. 23, No. 6, pp. 215-232, June 2024
<https://doi.org/10.26803/ijlter.23.6.10>
Received Apr 23, 2024; Revised Jun 13, 2024; Accepted Jun 22, 2024

The Impact of Transformational Leadership on Teacher Performance in Shandong Universities: The Mediating Role of the Psychological Contract

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Abstract. Transformational leadership refers to a leadership style that aims to inspire and motivate followers to exceed their own self-interests for the sake of the organization and achieve exceptional outcomes. In the context of increasing demands for improved faculty performance in higher education, the relationship between transformational leadership, psychological contract, and faculty performance in higher education institutions remains an active area of academic research. This study focuses on the mediating role of the psychological contract among faculty members in higher education institutions in Shandong Province, exploring the impact of transformational leadership on faculty performance. This study is a quantitative study that used a convenience sampling method to conduct a survey, recruiting 755 faculty members from various higher education institutions across Shandong, China. Data analysis was conducted using SPSS, and the results indicated that transformational leadership significantly enhances faculty members' psychological contract, consequently improving their performance levels. Moreover, the study revealed that the psychological contract is a key mechanism through which transformational leadership enhances faculty performance, primarily by fostering a higher sense of psychological contract fulfillment among educators. These insights underscore the crucial role of transformational leadership practices and the cultivation of a strong psychological contract in enhancing faculty performance in the higher education sector. The study advocates for the adoption of transformational leadership strategies by higher education administrators, coupled with concerted efforts to forge and sustain a meaningful psychological contract within faculties, as a means to bolster faculty performance.

Keywords: college teachers; transformational leadership; teacher work performance; psychological contract

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1. Introduction

With the intensification of educational reforms in China, the contribution of tertiary institutions to societal advancement and economic growth has gained importance (Fu, 2023). Colleges and universities are not only important bastions for the dissemination of knowledge but also key bases for the cultivation of innovative talents (Wang et al., 2020). In this process, college and university teachers play a crucial role (Ryan et al., 2020). Not only do they impart knowledge, but they also play an irreplaceable role in fostering students' innovative abilities, critical thinking, and sense of social responsibility (Zhang et al., 2021). Hence, enhancing the job performance of faculty members in colleges and universities is intrinsically linked to improving the caliber of educational outcomes and the holistic growth of students.

Faculty job performance is a crucial metric for assessing teaching quality, students' academic success, and overall educational results (Sirait, 2021). Excellent teachers can stimulate students' interest in learning through efficient teaching methods, promoting students' academic progress and thereby enhancing the overall teaching level as well as the social reputation of the colleges and universities (Stronge, 2018). Moreover, enhancing teachers' work performance not only aids in their professional career development but also increases the appeal of the school, attracting more outstanding students and research projects, and promoting the comprehensive progress of the school (Darling-Hammond, 2017). In discussing strategies for improving teachers' work performance, the transformational leadership theory offers an important perspective (Maheshwari, 2022). The theory posits that by establishing a sense of mission and common goals, transformational leadership can inspire employees' intrinsic motivation, prompting them to transcend personal interests and contribute to achieving higher organizational goals (Burns, 1978). Within the domain of business administration, transformational leadership has been extensively studied and has proven effective (Asad et al., 2021; Do & Rhee, 2021; Nasir et al., 2022; Shafi et al., 2020). However, compared to the rich discussions in the business field, investigations into transformational leadership within the higher education framework remain notably inadequate (Al-Husseini et al., 2021).

The higher education setting is distinct, and the management style of leaders significantly influences the attitudes and actions of faculty members (Baba et al., 2021). Against the backdrop of educational reform, higher education managers are increasingly aware of the critical importance of promoting teachers' work performance through transformational leadership to achieve educational goals (Bellibaş et al., 2021). Transformational leadership not only encourages teachers to set and pursue lofty team goals but also stimulates teachers' creativity (Domfeh et al., 2020) and enthusiasm (Miranda et al., 2021) by providing resources and support (Tsang et al., 2022), promoting teamwork and goal achievement (Naylor et al., 2021).

Moreover, as an informal expectation and commitment relationship between teachers and schools, the psychological contract can be effectively enhanced by transformational leadership through establishing trust, supporting personal

development (Liu et al., 2020), and reinforcing organizational commitment (Yao et al., 2020), thereby improving work performance (Sirait, 2021). A psychological contract refers to the unwritten set of expectations and beliefs that exists between an employer and an employee regarding the mutual obligations and benefits inherent within their working relationship. Unlike formal employment contracts, which are legally binding and explicitly outlined, the psychological contract is subjective and based on individual perceptions (Liu et al., 2020). Teachers' degree of satisfaction with their psychological contract directly affects their work attitudes and behaviors (Sobaih et al., 2019), further determining teachers' work engagement and performance (Knapp et al., 2020).

Consequently, the objective of this research is to thoroughly examine the ways in which transformational leadership influences the work performance of faculty members in tertiary institutions across Shandong Province, with a particular focus on the mechanism by which transformational leadership can bolster work performance through the reinforcement of the psychological contract among educators. Through theoretical analysis and empirical research, this study aims to provide effective leadership strategies for college and university managers to promote the improvement of teachers' work performance, thereby advancing the overall quality of higher education.

Specifically, this study aims to:

- Investigate the direct effects of transformational leadership on the performance of university faculty.
- Examine how the psychological contract influences the relationship between transformational leadership and teacher performance.
- Identify key transformational leadership practices that significantly enhance faculty performance.

2. Literature Review

2.1 Transformational Leadership and Teacher Work Performance

By influencing employees' values, transformational leadership not only promotes basic work performance but also inspires greater organizational commitment (Do & Rhee, 2021). Afsar and Umrani (2020) highlighted that this leadership style fosters innovation and encourages experimenting with new methods, enhancing task performance. Furthermore, Lan et al. (2019) found that the transformational leadership's impact on employee satisfaction exceeded that of transactional leadership, enhancing trust in leadership. While Nasir and colleagues (2022) demonstrated that transformational leadership significantly boosts innovation and performance, Asad et al. (2021) noted its positive effects on employees' extra effort, satisfaction, and prosocial behaviors. In the educational sector, transformational leadership is crucial for college and university teachers, as it influences their emotions, motivations, and values, thereby improving work performance (Sirait, 2021). Indeed, Shafi et al. (2020) further substantiated that transformational leadership enhances work performance by cultivating team cohesion. Maheshwari (2022) found that teachers' perceptions of transformational leadership directly affect their performance. Thus, adopting transformational

leadership in higher education can significantly improve teachers' work enthusiasm and performance.

Hypothesis 1 (H1): Transformational leadership in colleges and universities in Shandong Province, China, has a positive impact on teacher work performance.

2.2 Transformational Leadership and Teachers' The psychological contract

Under transformational leadership, employees are more likely to form a psychological contract, creating favorable conditions for job satisfaction and enhanced work performance (Kutaula et al., 2020). This leadership style builds trust, ensuring that the organization fulfills both its explicit and implicit commitments to teachers (Gkonou & Miller, 2021). The ethical example set by leaders significantly influences the psychological contract (Chang et al., 2020). By sharing the organization's vision, transformational leadership directly impacts the developmental aspects of teachers' psychological contract, highlighting opportunities for personal growth (Huang et al., 2021). Teachers seek personal development within such an organization, maintaining long-term contractual relationships (Wang et al., 2024). Transformational leaders' blend of charisma and confidence inspires willingness to follow (Hafeez et al., 2022). Indeed, their charisma affects the developmental and relational dimensions of the psychological contract (Samuel & Engelbrecht, 2021). Providing personalized attention that goes beyond formal obligations, such as salary and bonuses, significantly enhances the psychological contract between employees and the organization (Chang et al., 2020).

Hypothesis 2 (H2): Transformational leadership in colleges and universities in Shandong Province, China, has a positive impact on teachers' psychological contract.

2.3 The Psychological Contract and Teacher Work Performance

The psychological contract encapsulates the mutual expectations and commitments that exist between employees and their organization (Liu et al., 2020). In teaching, the psychological contract positively impacts faculty work performance (Sobaih et al., 2019) by stimulating intrinsic motivation, as teachers who feel supported and rewarded are more driven to excel (Sato & Loewen, 2019; Zhang et al., 2021). Such intrinsic motivation leads to higher engagement and better performance (Ryan et al., 2020). Satisfaction with the psychological contract is closely linked to job contentment, resulting in higher work performance (Naylor et al., 2021). Perceived organizational support fosters loyalty and dedication, motivating teachers to fulfill their duties and contribute to the institution's success (Yao et al., 2020). Moreover, fulfilling the psychological contract stimulates creativity and innovation, encouraging teachers to experiment with new techniques and tackle challenges, ultimately enhancing performance and advancing the educational field (Domfeh et al., 2020; Miranda et al., 2021).

Hypothesis 3 (H3): The psychological contract of college and university teachers in Shandong Province, China, has a positive impact on teacher work performance.

2.4 The Mediating Role of The psychological contract

Focusing on behavioral and motivational strategies, transformational leadership fosters a close connection and mutual trust between teachers and the organization (Baba et al., 2021). Leaders emphasize communication, listen to teachers, and focus on their development, which stimulates intrinsic motivation and engagement (Tsang et al., 2022). Furthermore, this leadership style also encourages innovation and the exploration of new teaching strategies, enhancing creative thinking and innovative capabilities. Psychological consensus, as a mutual understanding between leaders and teachers, reinforces these positive effects (Elsouk et al., 2021). Under transformational leadership, teachers are more likely to invest their skills and energy into their professional duties (Mansor et al., 2021). Leaders communicate their expectations for organizational rewards and support, and teachers respond by committing their efforts to the organization (Farrukh et al., 2022). Fulfilling the psychological contract strengthens teachers' sense of belonging and identification with the organization, motivating them to actively fulfill their duties (Dixon-Fowler et al., 2020). Satisfaction and identification with their work are closely related to improving work performance (Kilag et al., 2023).

Hypothesis 4 (H4): The the psychological contract of college and university teachers in Shandong Province, China, mediate the relationship between transformational leadership and teacher work performance.

2.5 Research Model

Social Exchange Theory is a sociological and psychological perspective that posits social behavior as the result of a process of exchanges. The theory suggests that human relationships are formed and maintained based on the costs and benefits involved (Blau, 1964). In an organizational context, such exchanges are not limited to material rewards but also include social and emotional returns (Cropanzano et al., 2017).

Transformational leadership emphasizes emotional bonding and value sharing between leaders and employees, inspiring employees' intrinsic motivation and enthusiasm through shared vision and encouragement (Do & Rhee, 2021). When employees feel that their leaders are invested in them, including the provision of emotional support and opportunities for personal development, they tend to reciprocate by improving their work performance, forming a positive reciprocal exchange pattern (Maheshwari, 2022). Transformational leadership strengthens this psychological contract, leading employees to recognize that their contributions will not only reap material rewards, but also non-material returns such as professional development, respect, and a sense of belonging. Hence, this paper argues that transformational leadership fosters a favorable social exchange dynamic by cultivating trust and respect. This dynamic motivates employees to exceed contractual minimums and demonstrate superior work performance, as depicted in Figure 1.

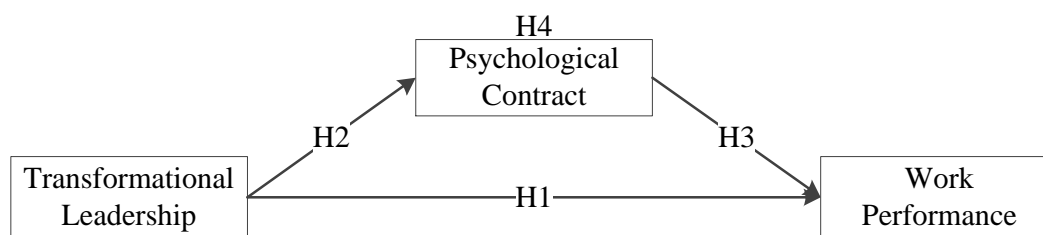


Figure 1: Research model

3. Methodology

The statistical analyses in this study includes both descriptive and inferential statistics to provide a comprehensive understanding of the data. Descriptive statistics, such as means, standard deviations, and frequency distributions, are used to summarize the demographic characteristics of the sample and key variables. For inferential statistics, we will use multiple regression analysis to test the hypothesized relationships between transformational leadership, the psychological contract, and teacher performance. Additionally, mediation analysis will be conducted using the SPSS PROCESS macro to examine the mediating role of the psychological contract.

3.1 Research Design and Data Collection Instrument

The survey questionnaire is a means of collecting data that represents the entire population through sampling to draw conclusions and infer the population's characteristics within allowable random error limits. The main advantage of this method lies in its ability to make inferences about a larger group based on a smaller one, offering benefits such as low cost, relatively high reliability and validity, and the rapid and effective collection of data. Consequently, this research utilizes a survey approach to quantitatively assess the effect of transformational leadership on work performance within colleges and universities in Shandong Province, China.

Following the sampling recommendations proposed by Ghiselli et al. (1981), the sample size for a study should be at least ten times the total number of items on the scales. According to this criterion, with four scales totaling 75 items in this study, at least 750 valid samples must be collected. To enhance the coverage of the sample and allow for potentially invalid questionnaires, the survey process ensured a focus on various types of schools and individual characteristics, while also considering the comprehensiveness of the sample.

The questionnaires were distributed both online and in paper format to the selected faculty members. Online surveys were administered using a secure survey platform, while paper surveys were distributed and collected by designated coordinators in each institution. To maximize response rates, follow-up reminders were sent via email and telephone to participants who had not yet completed the survey. A total of 800 college teachers participated in this survey, distributed across eight universities in three cities province-wide. Among them, 155 were from "211 Project" and "Double First-Class" universities, 245 from provincial key universities, 300 from ordinary provincial universities, and 100 from provincial vocational colleges. During the questionnaire collection, the

human resources departments of the related schools were contacted to coordinate the survey administration, which was conducted through online questionnaires. The collection period was from September 5, 2023, to October 5, 2023. After eliminating invalid questionnaires due to overly consistent answers, missing items, or too brief response times, 755 valid questionnaires were retained, resulting in an effective response rate of 94.375%.

3.2 Measurement

This study used the scale for transformational leadership in colleges and universities, developed by Zainal and Mohd Matore (2021), divided into four dimensions: moral modeling (six items), visionary inspiration (five items), individualized consideration (five items), and leadership charisma (five items). Moral modeling is regarded as an important quality among leaders, as leaders with moral modeling can positively influence and inspire subordinates through their moral conduct and behavior. Visionary inspiration refers to leaders who clearly communicate and describe the vision and goals of the organization to subordinates, motivating them to give their all to achieving this vision. Individualized consideration includes leaders' care for subordinates' work and lives, reflecting leaders' focus on human factors and the emotional relationships within the organization. Leadership charisma refers to leaders winning subordinates' admiration and respect through exemplary behavior and influence. The overall Cronbach's α coefficient of the scale is 0.802, with Cronbach's α coefficients for visionary inspiration, moral modeling, leadership charisma, and individualized consideration being 0.823, 0.764, 0.801, and 0.732, respectively. $\chi^2/df=3.268$, RMR = 0.045, SRMR = 0.032, RMSEA = 0.066, AGFI = 0.934, indicating that the transformational leadership scale's fit indices meet the test standards, showing that the model has a good fit.

The study adopted the work performance scale for college and university teachers created by Saleem et al. (2020), divided into task performance (nine items) and relational performance (six items). Task performance mainly refers to the behavior and output results of research university teachers in teaching, scientific research, and technology application, such as the quality of completed teaching, the quantity and quality of published papers, and the effectiveness of research extension. Relational performance mainly refers to potential factors affecting the work results of research university teachers, such as personal qualities, interpersonal communication, work attitude, and professional contribution. The overall Cronbach's α coefficient of the scale is 0.792, with reliability coefficients for task performance being 0.814 and for relational performance being 0.732. $\chi^2/df=2.978$, RMR=0.043, SRMR=0.033, RMSEA = 0.061, AGFI=0.898, indicating that most of the work performance scale's fit indices meet the test standards, showing that the model has a good fit.

Furthermore, the study used the psychological contract scale for college and university teachers by Xu and Sun (2022), divided into transactional (seven items), balanced (eight items), and relational (six items) dimensions. Transactional contracts focus on tasks and rewards, balanced contracts emphasize reciprocal relationships, and relational contracts concentrate on interpersonal relationships

and trust. The overall Cronbach's α coefficient of the scale is 0.874, with reliability coefficients for task performance being 0.821 and for relational performance being 0.830. $\chi^2/df = 2.631$, RMR = 0.042, SRMR = 0.031, RMSEA = 0.056, AGFI = 0.942, indicating that the psychological contract scale's fit indices meet the test standards, showing that the model has a good fit.

3.3 Sample

In this survey, targeting faculty members across higher education institutions in Shandong Province, 800 questionnaires were initially collected. After excluding invalid responses due to excessively brief completion times or logical discrepancies, 755 valid questionnaires remained. This resulted in an impressive effective response rate of 94.375%, ensuring the data's reliability and representativeness for the study.

In terms of gender distribution, male teachers accounted for 65%, totaling 490 individuals, while female teachers comprised 35%, totaling 265 individuals. This distribution reflects the current situation in Shandong Province's higher education institutions, where males are more predominant in the teaching workforce. Regarding age groups, the sample of this study covered a wide range of ages. There were 188 teachers under 30 years old, accounting for 25% of the sample; 431 teachers between 30-45 years old, accounting for the highest proportion at 57%; 98 teachers aged 46-55 years old, accounting for 13%; and 38 teachers aged over 55, accounting for 5%, all of which showcases the age diversity within the teacher workforce. With regard to teaching experience, the sample included 181 novice teachers with less than 5 years' experience, accounting for 24%; the largest group was teachers with 5-10 years' experience, totaling 385 individuals or 51%; teachers with 10-20 years' experience numbered 151, accounting for 20%; and 38 teachers with over 20 years' experience, accounting for 5%.

3.4 Research Ethics

Focusing on university teachers, this study employed a survey as the primary research method by which to investigate teacher work performance. Conducted in 2023, the study employed purposive sampling to select participants, examining their perceptions of transformational leadership, the psychological contract, and work performance among university teachers in Shandong Province, China. Prior to data collection, informed consent was obtained from all participants and a confidentiality agreement was employed to protect the privacy of the research subjects. While gaining informed consent, the potential risks and benefits of the project were explained, and the researchers' consent information was provided for assurance. Ethically, the study adhered to the '2015 Thai Guidelines for Human Subject Research Ethics' established by the Thailand National Research Committee. These guidelines govern activities involving the collection, recording, use, reporting, or storage of scientific research data related to human samples, medical records, and behaviors, through epidemiological, sociological, psychological, and other methods. Given that this study involved Chinese university teachers, utilized the psychological contract as a mediator, and employed psychological methods to collect and utilize scientific research data concerning human subjects, in order to investigate the impact of transformational

leadership on teacher job performance, adherence to the '2015 Thai Guidelines for Human Subject Research Ethics' was necessary for ethical review.

4. Analysis

4.1 Common Method Bias

To address the concern of common method bias (CMB), this research implemented two analytical strategies. The first approach, the Harman single-factor test, employs exploratory factor analysis (EFA) to scrutinize CMB. EFA posits the existence of a method factor accounting for the shared variance across all study items pertaining to various attributes. A higher percentage of variance accounted for by this factor indicates a more pronounced bias. This study conducted EFA on key measures including transformational leadership, work performance, the psychological contract, and organizational commitment among college educators. The analysis revealed that the variance attributable to the foremost unrotated factor stood at 31.499%, falling short of the 50% threshold. This outcome suggests the absence of a significant common variance issue.

Moreover, this investigation applied both single-factor and multi-factor confirmatory factor analyses (CFA) to evaluate the potential for CMB within the model. By comparing the chi-square (χ^2) values' degrees of freedom discrepancy between these models, a notably superior fit was observed in the multi-factor model compared to the single-factor one. Specifically, the χ^2 for both single-factor and multi-factor models stood at 3918.888, with a difference in degrees of freedom (Δdf) of 15, and the divergence in χ^2 between the models was statistically significant ($p < 0.001$). This significant disparity underscores the minimal presence of common method bias, as corroborated by Chin et al. (2012), and is detailed in Table 1.

Table 1: CFA and Results of Model Comparison

Model	χ^2	df	$\Delta\chi^2$	Δdf	p
Single-factor Model	6123.839	945	3918.888	15	0.000
Multi-factor Model	2204.951	930			

4.2 Correlation Analysis

Table 2 outlines the descriptive statistics and correlation analysis for the studied variables, indicating that transformational leadership ($M=2.957$, $SD=0.977$), the psychological contract ($M=3.300$, $SD=0.633$), and work performance ($M=3.787$, $SD=0.822$) register at moderate to high levels. Additionally, Pearson correlation analysis reveals that the interrelations between transformational leadership, the psychological contract, and the work performance of college educators are statistically significant ($p < 0.001$), with correlation coefficients spanning from 0.645 to 0.691. All of these coefficients fall below the threshold of 0.700, suggesting the absence of collinearity issues, in line with Dormann et al. (2013). Moreover, the discriminant validity assessment, using the square root of the Average Variance Extracted (AVE), demonstrates that for any pair of variables, the AVE of each exceeds their correlation coefficient, fulfilling the criteria for discriminant validity.

Table 2: Correlation Matrix

Variable	M	SD	Transformational Leadership	Psychological Contract	Work Performance
Transformational Leadership	2.957	0.977	0.706		
Psychological Contract	3.300	0.633	0.646***	0.691	
Work Performance	3.787	0.622	0.689***	0.559***	0.732

Note: *** $p < 0.001$; diagonal values are the square root of the AVE of each variable

4.3 Hypothesis Testing

In this study, gender, age and teaching experience were selected as three background variables for control. Since these variables are categorical, they were converted into dummy variables before being included in the regression model, giving them the characteristics of continuous variables and dividing them into $n-1$ groups. For gender, male teachers were set as the experimental group, and female teachers as the control group. For age, those under 30, between 31 and 45, and between 46 and 55 were set as experimental groups, with those aged 56 and older being the control group; for years of teaching, those with fewer than 5 years' experience, between 6 and 10 years, and between 11 and 20 years were set as experimental groups, with those having over 20 years' experience forming the control group.

Using the SPSS PROCESS plugin model 4 by Hayes (2012), the study analyzed the relationships between transformational leadership, work performance and the psychological contract among college educators. The plugin's capability for mediation and moderation analysis made it suitable for this research. The findings are detailed in Table 3.

Within the context of higher education, transformational leadership exhibited by faculty significantly boosts work performance ($B=0.635, p < 0.001$); this aligns with previous research by Orabi (2016) and Afsar and Umrani (2020), who also reported that transformational leadership positively impacts employee performance. This suggests that the enhanced transformational leadership qualities of faculty members correlate with improved work performance, affirming H1. Similarly, a notable positive effect of transformational leadership on the psychological contract of faculty members was observed ($B=0.733, p < 0.001$), implying that stronger transformational leadership traits lead to a more robust psychological contract, corroborating H2. Furthermore, a substantial positive relationship exists between the psychological contract of faculty members and teacher work performance ($B=0.763, p < 0.001$), demonstrating that a higher degree of the psychological contract is associated with better work performance, thereby validating H3.

In Model 1, it can be seen that transformational leadership demonstrated by college faculty members significantly enhances work performance ($B=0.635, p < 0.001$), suggesting that enhanced leadership qualities correlate with improved job outcomes. Model 2 reveals that transformational leadership significantly strengthens the psychological contract ($B=0.733, p < 0.001$), indicating that the

degree of transformational leadership influences this contract. When introducing the psychological contract as a mediator in Model 3, the effect of transformational leadership on work performance shifts from ($B=0.635$, $p<0.001$) in Model 1 to ($B=0.335$, $p<0.05$) in Model 3. Following the criteria outlined by Baron and Kenny (1986), this change suggests that the psychological contract serve as a partial mediator between transformational leadership and work performance among faculty, thus validating H4.

Table 3: Mediating Model of The psychological contract

Variable	Model 1	Model 2	Model 3
	Work Performance	Psychological Contract	Work Performance
	B	B	B
Males	0.058	0.043	0.026
Under 30 years old	-0.005	0.005	0.043
31 to 45 years old	0.012	-0.012	-0.039
46 to 55 years old	-0.008	-0.053	-0.015
Less than 5 years	-0.050	-0.033	-0.055
5-10 years	0.079	0.092	0.097
10-20 years	-0.088	0.063	0.081
Transformational Leadership	0.635***	0.733***	0.335**
Psychological Contract			0.763***
Adj R ²	0.301	0.440	0.467
F	29.261***	52.692***	54.230***

Note: * $p<0.050$, ** $p<0.010$, *** $p<0.001$; B=unstandardized coefficient.

Note 2: Gender, age, and teaching experience are dummy variables. Males are the experimental group, while females are the control group; those under 30, between 31 and 45, and between 46 and 55 are experimental groups, with those 56 and older being the control group; those with less than 5 years, 5-10 years, and 10-20 years' teaching experience are experimental groups, while those with more than 20 years' teaching experience are the control group.

Furthermore, this research investigated the mediating role of the psychological contract using the bootstrap technique, a prominent method in mediation analysis renowned for its effectiveness and precision (Hayes & Rockwood, 2017). Setting the bootstrap samples to 5,000 with a 95% confidence interval, the findings highlighted an indirect effect of (0.400, $p<0.001$, 95% CI=[0.021, 0.200]) and a direct effect of (0.135, 95% CI=[0.034, 0.105]). The total effect was determined to be (0.435, $p<0.001$, 95% CI=[0.097, 0.774]), with the mediation effect contributing to 89.552% of the total effect. This finding is consistent with the studies by Chang et al. (2020) and Gkonou and Miller (2021), which highlighted the importance of the psychological contract in enhancing employee performance through leadership practices. These outcomes reconfirm the significant partial mediation role of the psychological contract in the relationship between transformational leadership and work performance, as detailed in Table 4.

Table 4: Bootstrap Test for Mediation Effect

Path	Estimate	95% CI	
		Lower	Upper
Direct effects: Transformational Leadership→Work Performance	0.135**	0.034	0.105
Indirect effects: Transformational Leadership→Psychological Contract→Work Performance	0.400***	0.021	0.200
Total effect: Transformational Leadership→Work Performance	0.435***	0.097	0.374

Note: ** $p < 0.01$, *** $p < 0.001$

5. Discussion

This research examined the way in which transformational leadership affects faculty performance in higher education institutions across Shandong Province, China, establishing a substantial positive effect of transformational leadership on faculty job outcomes, thereby validating hypothesis H1. This result aligns with the findings of previous studies (Afsar & Umrani, 2020; Do & Rhee, 2021; Maheshwari, 2022; Nasir et al., 2022), underscoring transformational leadership's efficacy as a leadership paradigm within the academic sector. By setting clear and challenging goals closely connected to the overall development strategy of the school, transformational leadership provides teachers with clear work guidance and direction. It also takes into account the personal growth and professional development needs of teachers, thereby inspiring their intrinsic motivation and innovativeness to efficiently complete teaching and research tasks.

Additionally, the research revealed that transformational leadership positively influences the psychological contract of teachers, validating H2, and aligning with prior research results (Chang et al., 2020; Gkonou & Miller, 2021; Wang et al., 2024). Through visionary guidance, transformational leadership enhances teachers' positive attitudes and expectations toward their work, thereby improving teachers' psychological contract with the school.

Furthermore, and consistent with previous findings (Ryan et al., 2020; Sato & Loewen, 2019; Yao et al., 2020), this research demonstrated the positive impact of teachers' psychological contract on work performance, validating H3. A higher satisfaction level with the psychological contract not only directly enhances teachers' emotional commitment and work engagement but also indirectly promotes teachers' commitment and effort toward school goals by strengthening the psychological contract, thereby improving work performance.

In addition, the study also revealed that the psychological contract fully mediates between teachers' perceptions of transformational leadership and work performance, validating H4. This result aligns with the findings of previous studies (Dixon-Fowler et al., 2020; Mansor et al., 2021; Tsang et al., 2022) and highlights the role of the psychological contract as a bridge connecting transformational leadership and teacher work performance. By demonstrating integrity, care, and support, transformational leadership builds trust between leaders and teachers, helps to reduce uncertainty, and increases teachers' sense of

security, thereby directly and indirectly enhancing teachers' job satisfaction and performance.

5.1. Theoretical Implications

This study provides significant theoretical contributions by expanding the understanding of transformational leadership within the context of higher education. Firstly, it highlights the pivotal role of the psychological contract as a mediating factor, offering a nuanced perspective on the way in which transformational leadership can enhance faculty performance. This underscores the importance of the psychological contract in organizational behavior and leadership studies. Secondly, the research enriches the literature on educational leadership by demonstrating the applicability and effectiveness of transformational leadership in improving teacher performance in universities. Moreover, these findings suggest that fostering a strong psychological contract can be a strategic approach to achieving higher educational outcomes, thus providing a valuable framework for future research in educational management and leadership.

5.2. Practical Implications

The findings of this study offer several practical implications for higher education administrators and policymakers. Implementing transformational leadership practices can significantly enhance teacher performance by fostering a robust psychological contract. Administrators should focus on building trust, providing support, and aligning institutional goals with personal development opportunities for teachers. This can be achieved through regular communication, professional development programs, and creating a supportive work environment. Additionally, understanding the critical role of the psychological contract can help institutions to develop strategies that meet the implicit and explicit needs of faculty members, thereby boosting teachers' commitment and performance. Such strategies may include recognizing and rewarding teachers' contributions, offering clear career advancement paths, and ensuring a fair and supportive work culture. By adopting these practices, higher education institutions can create a more motivated, satisfied, and high-performing faculty, ultimately leading to improved educational outcomes and institutional success.

5.3. Limitations and Recommendations for Further Research

Despite the significance of its findings in extending current knowledge and contributing to the literature on the subject, this study has several limitations. Firstly, it employs a cross-sectional design, which restricts the ability to infer causality. Longitudinal studies are recommended to examine the long-term effects of transformational leadership on teacher performance. Secondly, the research is limited to universities in Shandong Province, which may affect the generalizability of the findings. Future research should include a broader geographical scope to enhance the applicability of the results. Additionally, incorporating qualitative methods could provide deeper insights into the mechanisms through which transformational leadership influences the psychological contract and performance. Further studies could also explore other mediating factors, such as organizational culture and job satisfaction, to provide a more comprehensive understanding of the dynamics at play.

6. Conclusion

This investigation provides empirical insights into the influence of transformational leadership on faculty performance within colleges and universities in Shandong Province, emphasizing the pivotal role of the psychological contract. The findings reveal that transformational leadership exerts a notably positive impact on enhancing faculty work performance. By nurturing teachers' inherent motivation and fostering innovation and a collaborative spirit, transformational leadership significantly elevates faculty enthusiasm and output. In summary, the study highlights that leaders who exhibit transformational qualities – such as setting clear and challenging goals, providing inspirational motivation, and offering individualized support – can effectively enhance teachers' work performance.

Moreover, the psychological contract serves as a crucial intermediary between transformational leadership and faculty work performance. Encompassing the unwritten expectations and obligations between teachers and their institutions, the psychological contract plays a vital role in shaping faculty attitudes and behaviors. The degree of fulfillment of this contract directly affects teachers' job satisfaction, commitment, and performance. When teachers perceive that the psychological contract is honored, they are more likely to engage deeply with their work, exhibit higher levels of motivation, and contribute positively to the institution's goals. Thus, fostering the psychological contract together with implementing transformational leadership practices can lead to a better motivated, more satisfied, and high-performing faculty, ultimately enhancing the overall quality of education and institutional success. Future research should continue to explore these dynamics, considering other potential mediators and varying cultural contexts to further validate and expand upon these findings.

7. References

- Afsar, B., & Umrani, W. A. (2020). Transformational leadership and innovative work behavior: The role of motivation to learn, task complexity and innovation climate. *European Journal of Innovation Management*, 23(3), 402-428. <https://doi.org/10.1108/EJIM-12-2018-0257>
- Al-Husseini, S., El Beltagi, I., & Moizer, J. (2021). Transformational leadership and innovation: The mediating role of knowledge sharing amongst higher education faculty. *International Journal of Leadership in Education*, 24(5), 670-693. <https://doi.org/10.1080/13603124.2019.1588381>
- Asad, M., Asif, M. U., Bakar, L. J. A., & Sheikh, U. A. (2021). Transformational leadership, sustainable human resource practices, sustainable innovation and performance of SMEs. In *2021 International Conference on Decision Aid Sciences and Application (DASA)* (pp. 797-802). IEEE. <https://doi.org/10.1109/DASA53625.2021.9682400>
- Baba, M. M., Makhdoomi, U. M., & Siddiqi, M. A. (2021). Emotional intelligence and transformational leadership among academic leaders in institutions of higher learning. *Global Business Review*, 22(4), 1070-1096. <https://doi.org/10.1177/0972150918822421>
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182. <https://doi.org/10.1037/0022-3514.51.6.1173>

- Bellibaş, M. Ş., Kılınç, A. Ç., & Polatcan, M. (2021). The moderation role of transformational leadership in the effect of instructional leadership on teacher professional learning and instructional practice: An integrated leadership perspective. *Educational Administration Quarterly*, 57(5), 776-814. <https://doi.org/10.1177/0013161X211035079>
- Blau, P. M. (1964). Justice in social exchange. *Sociological Inquiry*, 34(2), 193-206. <https://doi.org/10.1111/j.1475-682X.1964.tb00583.x>
- Burns, J. M. (1978). *Leadership*. Open Road Media.
- Chang, W., Busser, J., & Liu, A. (2020). Authentic leadership and career satisfaction: The meditating role of thriving and conditional effect of psychological contract fulfillment. *International Journal of Contemporary Hospitality Management*, 32(6), 2117-2136. <https://doi.org/10.1108/IJCHM-06-2019-0551>
- Chin, W. W., Thatcher, J. B., & Wright, R. T. (2012). Assessing common method bias: Problems with the ULMC technique. *MIS Quarterly*, 1003-1019. <https://www.jstor.org/stable/41703491>
- Cropanzano, R., Anthony, E. L., Daniels, S. R., & Hall, A. V. (2017). Social exchange theory: A critical review with theoretical remedies. *Academy of Management Annals*, 11(1), 479-516. <https://doi.org/10.5465/annals.2015.0099>
- Darling-Hammond, L. (2017). Teacher education around the world: What can we learn from international practice?. *European Journal of Teacher Education*, 40(3), 291-309. <https://doi.org/10.1080/02619768.2017.1315399>
- Dixon-Fowler, H., O'Leary-Kelly, A., Johnson, J., & Waite, M. (2020). Sustainability and ideology-infused the psychological contract: An organizational-and employee-level perspective. *Human Resource Management Review*, 30(3), 100690. <https://doi.org/10.1016/j.hrmr.2019.100690>
- Do, B., & Rhee, S. Y. (2021). University students' perception of transformational leadership of the university president in Korea: The role of students' personality, affect, and affective commitment to the university. *International Journal of Learning, Teaching and Educational Research*, 20(1), 160-184. <https://doi.org/10.26803/ijlter.20.1.9>
- Domfeh, H. A., Hunsaker, W. D., & KOREA, S. (2020). The effect of job security on the commitment of teachers in Ghana: The mediating role of career satisfaction. *WSEAS Transactions on Business and Economics*, 17(18), 164-171. <https://doi.org/10.37394/23207.2020.17.18>
- Dormann, C. F., Elith, J., Bacher, S., Buchmann, C., Carl, G., Carré, G., ... & Lautenbach, S. (2013). Collinearity: A review of methods to deal with it and a simulation study evaluating their performance. *Ecography*, 36(1), 27-46. <https://doi.org/10.1111/j.1600-0587.2012.07348.x>
- Elsouk, S., Elsubbagh, S., Ayoun, B., & Radwan, A. (2021). The mediating role of psychological contract fulfillment in the relationship between organizational support and employee performance. *Psychology and Behavioral Sciences*, 10(25), 10-1017. <https://doi.org/10.11648/j.pbs.20211001.14>
- Farrukh, M., Meng, F., & Raza, A. (2022). Believe they can succeed, and they will: Intrapreneurial behavior and leadership. *European Journal of Innovation Management*, 25(3), 661-679. <https://doi.org/10.1108/EJIM-10-2020-0393>
- Fu, J. (2023). Leading educational change: A study of the impact of transnational university on China's higher education reform. *International Journal of Learning and Teaching*, 10(1), 150-158. <https://doi.org/10.18178/ijlt.10.1.150-158>
- Ghiselli, E. E., Campbell, J. P., & Zedeck, S. (1981). *Measurement theory for the behavioral sciences*. W. H. Freeman.

- Gkonou, C., & Miller, E. R. (2021). An exploration of language teacher reflection, emotion labor, and emotional capital. *Tesol Quarterly*, 55(1), 134-155. <https://doi.org/10.1002/tesq.580>
- Hafeez, M., & Bidari, S. (2022). How does transformational leadership style effect on the organizational performance? The case of educational institutions. *South Asian Review of Business and Administrative Studies (SABAS)*, 4(2), 113-128. <https://doi.org/10.52461/sabas.v4i2.1514>
- Hayes, A. F. (2012). *PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling* [White paper]. Retrieved from <http://www.afhayes.com/public/process2012.pdf>
- Hayes, A. F., & Rockwood, N. J. (2017). Regression-based statistical mediation and moderation analysis in clinical research: Observations, recommendations, and implementation. *Behaviour Research and Therapy*, 98, 39-57. <https://doi.org/10.1016/j.brat.2016.11.001>
- Huang, Y. T., Liu, H., & Huang, L. (2021). How transformational and contingent reward leaderships influence university faculty's organizational commitment: The mediating effect of psychological empowerment. *Studies in Higher Education*, 46(11), 2473-2490. <https://doi.org/10.1080/03075079.2020.1723534>
- Kilag, O. K. T., Angtud, R. M. A., Uy, F. T., Alvez, G. G. T., Zamora, M. B., Canoy, C. B., & Sasan, J. M. (2023). Exploring the relationships among work motivation, job satisfaction, administrative support, and performance of teachers: A comprehensive study. *International Journal of Scientific Multidisciplinary Research*, 1(3), 239-248. <https://doi.org/10.55927/ijsmr.v1i3.3471>
- Knapp, J. R., Diehl, M. R., & Dougan, W. (2020). Towards a social-cognitive theory of multiple the psychological contract. *European Journal of Work and Organizational Psychology*, 29(2), 200-214. <https://doi.org/10.1080/1359432X.2019.1709538>
- Kutaula, S., Gillani, A., & Budhwar, P. S. (2020). An analysis of employment relationships in Asia using psychological contract theory: A review and research agenda. *Human Resource Management Review*, 30(4), 100707. <https://doi.org/10.1016/j.hrmr.2019.100707>
- Lan, T. S., Chang, I. H., Ma, T. C., Zhang, L. P., & Chuang, K. C. (2019). Influences of transformational leadership, transactional leadership, and patriarchal leadership on job satisfaction of cram school faculty members. *Sustainability*, 11(12), 3465. <https://doi.org/10.3390/su11123465>
- Liu, W., He, C., Jiang, Y., Ji, R., & Zhai, X. (2020). Effect of gig workers' psychological contract fulfillment on their task performance in a sharing economy: A perspective from the mediation of organizational identification and the moderation of length of service. *International Journal of Environmental Research and Public Health*, 17(7), 2208. <https://doi.org/10.3390/ijerph17072208>
- Maheshwari, G. (2022). Influence of teacher-perceived transformational and transactional school leadership on teachers' job satisfaction and performance: A case of Vietnam. *Leadership and Policy in Schools*, 21(4), 876-890. <https://doi.org/10.1080/15700763.2020.1866020>
- Mansor, A. N., Abdullah, R., & Jamaludin, K. A. (2021). The influence of transformational leadership and teachers' trust in principals on teachers' working commitment. *Humanities and Social Sciences Communications*, 8(1), 1-9. <https://doi.org/10.1057/s41599-021-00985-6>
- Miranda, J., Navarrete, C., Noguez, J., Molina-Espinosa, J. M., Ramírez-Montoya, M. S., Navarro-Tuch, S. A., . . . & Molina, A. (2021). The core components of education 4.0 in higher education: Three case studies in engineering education. *Computers &*

- Electrical Engineering*, 93, 107278.
<https://doi.org/10.1016/j.compeleceng.2021.107278>
- Nasir, J., Ibrahim, R. M., Sarwar, M. A., Sarwar, B., Al-Rahmi, W. M., Alturise, F., ... & Uddin, M. (2022). The effects of transformational leadership, organizational innovation, work stressors, and creativity on employee performance in SMEs. *Frontiers in Psychology*, 13, 772104. <https://doi.org/10.3389/fpsyg.2022.772104>
- Naylor, R., Bird, F. L., & Butler, N. E. (2021). Academic expectations among university students and staff: Addressing the role of the psychological contract and social norms. *Higher Education*, 82(5), 847-863. <https://doi.org/10.1007/s10734-020-00668-2>
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61, 101860. <https://doi.org/10.1016/j.cedpsych.2020.101860>
- Saleem, A., Aslam, S., Yin, H. B., & Rao, C. (2020). Principal leadership styles and teacher job performance: Viewpoint of middle management. *Sustainability*, 12(8), 3390. <https://doi.org/10.3390/su12083390>
- Samuel, O. M., & Engelbrecht, A. S. (2021). How transformational leadership, psychological contract violation, empowerment and affective commitment influence employee's intention to quit an organisation. *South African Journal of Business Management*, 52(1), a2278. <https://doi.org/10.4102/sajbm.v52i1.2278>
- Sato, M., & Loewen, S. (2019). Do teachers care about research? The research-pedagogy dialogue. *ELT Journal*, 73(1), 1-10. <https://doi.org/10.1093/elt/ccy048>
- Shafi, M., Lei, Z., Song, X., & Sarker, M. N. I. (2020). The effects of transformational leadership on employee creativity: Moderating role of intrinsic motivation. *Asia Pacific Management Review*, 25(3), 166-176. <https://doi.org/10.1016/j.apmr.2019.12.002>
- Sirait, D. (2021). The influence of principal transformational leadership, work culture and work environment on teacher performance in state senior high schools throughout Banjarbaru City. *J Adv Educ Philos*, 5(12), 391-400. <https://doi.org/10.36348/jaep.2021.v05i12.004>
- Sobaih, A. E. E., Ibrahim, Y., & Gabry, G. (2019). Unlocking the black box: Psychological contract fulfillment as a mediator between HRM practices and job performance. *Tourism Management Perspectives*, 30, 171-181. <https://doi.org/10.1016/j.tmp.2019.03.001>
- Stronge, J. H. (2018). *Qualities of effective teachers*. ASCD.
- Tsang, K. K., Du, Y., & Teng, Y. (2022). Transformational leadership, teacher burnout, and psychological empowerment: A mediation analysis. *Social Behavior and Personality: An International Journal*, 50(1), 1-11. <https://doi.org/10.2224/sbp.11041>
- Wang, P., Chu, P., Wang, J., Pan, R., Sun, Y., Yan, M., ... & Zhang, D. (2020). Association between job stress and organizational commitment in three types of Chinese university teachers: Mediating effects of job burnout and job satisfaction. *Frontiers in Psychology*, 11, 576768. <https://doi.org/10.3389/fpsyg.2020.576768>
- Wang, T., Motevalli, S., & Lin, J. (2024). Unveiling the transformative influence: Qualitative insights into teachers' innovative work behavior in Chinese higher education. *International Journal of Learning, Teaching and Educational Research*, 23(1), 360-373. <https://doi.org/10.26803/ijlter.23.1.18>
- Xu, J., & Sun, L. (2022). Study on the relationship of the teacher's perceived organizational support, psychological contract and their job satisfaction in private universities: A cross-sectional survey in Shanghai, China. *Open Access Library Journal*, 9(12), 1-15. <https://doi.org/10.4236/oalib.1109546>

- Yao, J., You, Y., & Zhu, J. (2020). Principal–teacher management communication and teachers’ job performance: The mediating role of psychological empowerment and affective commitment. *The Asia-Pacific Education Researcher*, 29, 365-375. <https://doi.org/10.1007/s40299-019-00490-0>
- Zainal, M. A., & Mohd Matore, M. E. E. (2021). The influence of teachers’ self-efficacy and school leaders’ transformational leadership practices on teachers’ innovative behaviour. *International Journal of Environmental Research and Public Health*, 18(12), 6423. <https://doi.org/10.3390/ijerph18126423>
- Zhang, D., He, J., & Fu, D. (2021). How can we improve teacher’s work engagement? based on Chinese experiences. *Frontiers in Psychology*, 12, 721450. <https://doi.org/10.3389/fpsyg.2021.721450>