The Causal Model of Teachers' Organizational Commitment in Universities: Evidence from Yantai, China

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Abstract

This article aimed to examine the causal relationships among distributed leadership, school climate, teacher efficacy, individual characteristics, and organizational commitment of university teachers in Yantai, China, and to propose evidence-based guidelines for enhancing faculty commitment. An explanatory sequential mixed-methods design was employed, in which qualitative findings were used to explain and extend the quantitative structural equation modeling (SEM) results. The quantitative component involved a sample of 402 faculty members drawn from six universities in Yantai through stratified random sampling. Data were collected via a structured questionnaire and analyzed using SEM, while qualitative data were gathered through in-depth interviews with 24 participants and analyzed using content analysis. The qualitative phase specifically explored the underlying mechanisms behind statistically significant relationships identified in the SEM model, thereby explaining the "why" behind the causal pathways. Results indicated that distributed leadership (β=0.187, p<0.001), school climate (β=0.144, p=0.003), and teacher individual characteristics (β=0.255, p<0.001) exerted significant direct effects on organizational commitment, while teacher efficacy also played a critical mediating role linking institutional and individual factors to organizational commitment. The structural model explained 34.9% of the variance in organizational commitment (R^2=0.349), Indicating moderate predictive power and suggesting that additional contextual variables might further enhance explanatory capacity. Qualitative findings further revealed that teachers' retention and commitment were driven primarily by emotional attachment to their institutions and a strong sense of professional responsibility, rather than by external incentives such as financial rewards or promotion opportunities. This divergence suggested that leadership and organizational climate

were perceived not merely as external incentives but as relational and psychological support mechanisms that reinforced intrinsic motivation. Based on the integrated findings, the study proposed a PDCA (Plan–Do–Check–Act)–based intervention framework focusing on leadership practices, institutional climate, and teacher efficacy as strategic levers for strengthening organizational commitment. Specifically, the framework emphasized (1) policy and leadership development (Plan), (2) implementation of mentorship and collaborative systems (Do), (3) evaluation through performance indicators such as retention rates and teaching effectiveness (Assessment), and (4) continuous institutional improvement (Act). These findings contribute theoretically to higher education research by extending Social Exchange Theory in a non–Western context and provide practical implications for university administrators and policymakers seeking to enhance faculty engagement and long–term institutional sustainability.

Keywords Teacher Organizational Commitment; Teacher Efficacy; Distributed Leadership; School Climate; Higher Education China

Introduction

Teacher organizational commitment is widely recognized as a critical factor in determining the success and sustainability of educational institutions. Teacher organizational commitment (TOC) refers to the emotional attachment, sense of responsibility, and loyalty that teachers develop toward their institutions. It plays a vital role in educational management, as it not only influences teachers' job satisfaction and performance but also significantly affects institutional effectiveness and student academic outcomes (Karakuş & Aslan, 2009). Teachers with high levels of organizational commitment are more likely to demonstrate stronger motivation, greater professional engagement, and a higher willingness to contribute to institutional development, thereby enhancing teaching quality and organizational stability.

Despite extensive research on teacher organizational commitment, the specific mechanisms through which institutional and individual factors interact to influence commitment in the context of Chinese higher education remain insufficiently explored. In particular, the dynamic relationships among distributed leadership, school climate, teacher efficacy, and individual characteristics have not been adequately integrated into a comprehensive causal model. This gap is especially evident in regional contexts such as Yantai City, where higher education institutions are undergoing rapid transformation due to policy reforms and expansion.

In recent years, educational reforms in China have introduced increasing pressures on university teachers, including heightened research expectations, teaching workload demands, and performance evaluation systems. In Yantai City, the expansion of higher education institutions and the diversification of university types (e.g., public, private, and vocational institutions) have further intensified these challenges, creating a complex organizational environment that directly influences teachers' commitment and professional behavior. Traditional centralized management structures may limit teacher participation in decision-making, thereby reducing job satisfaction and weakening organizational attachment.

Furthermore, prior studies have shown that organizational commitment is closely associated with teacher retention, job burnout, and mental well-being. While some research suggests that normative commitment may increase burnout under certain conditions, affective commitment remains a key factor in sustaining long-term engagement. At the same time, mental health has been found to be strongly related to multiple dimensions of organizational commitment. However, these studies often examine variables in isolation rather than exploring their integrated causal relationships, particularly the mediating role of teacher efficacy in linking organizational conditions to commitment outcomes.

This study addresses these gaps by proposing and empirically testing a comprehensive causal model that integrates distributed leadership, school climate, teacher efficacy, and individual characteristics within a unified analytical framework. The study also seeks to explain why and how these factors interact, using a mixed-methods approach that combines Structural Equation Modeling (SEM) with qualitative analysis.

Research Objectives

1. To examine the causal relationships among distributed leadership, school climate, teacher efficacy, individual characteristics, and teachers' organizational commitment in universities in Yantai City, China.

2. To develop evidence-based and context-specific guidelines for enhancing teachers' organizational commitment, based on an integrated PDCA (Plan–Do–Check–Act) framework.

Literature Review

This study draws upon four major theoretical perspectives—Social Exchange Theory, Psychological Contract Theory, Goal Commitment Theory, and Perceived Organizational Support (POS) Theory—to explain the formation and development of teachers' organizational commitment. 0 These theories collectively emphasize reciprocal relationships, shared expectations, motivational processes, and perceived support within educational organizations.

Social Exchange Theory (SET) explains organizational commitment as a reciprocal exchange in which individuals seek to maximize benefits and minimize costs (Homans, 1958; Blau, 1964). In educational institutions, teachers develop commitment when they perceive fair treatment, leadership support, empowerment, and career opportunities. Empirical studies show that supportive school climates and organizational support increase teachers' loyalty, extra-role behaviors, and long-term commitment (Rhoades & Eisenberger, 2002). However, prior studies based on SET often examine these relationships in isolation and do not fully capture the mediating psychological mechanisms through which organizational conditions influence commitment outcomes.

Psychological Contract Theory focuses on implicit expectations between teachers and institutions (Argyris, 1960). Teachers' psychological contracts include transactional (e.g., pay and promotion), relational (e.g., belonging and trust), and developmental (e.g., professional growth) dimensions. Fulfillment of these expectations significantly increases teachers' affective, continuance, and normative commitment, while contract breaches reduce trust and increase turnover intentions (Coyle-Shapiro & Kessler, 2000). Despite its explanatory power, this theory has been criticized for insufficiently addressing how organizational structures such as leadership and climate shape these expectations in different cultural contexts.

Goal Commitment Theory emphasizes individuals' determination to pursue organizational goals (Locke & Latham, 1990). In educational settings, teachers' commitment strengthens when they identify with clear, attainable, and shared institutional goals. Transformational and participatory leadership enhances goal commitment by fostering ownership, self-efficacy, and organizational identification (Bass & Avolio, 1994). However, existing research rarely integrates goal commitment with broader organizational variables such as school climate and leadership structures within a single causal model.

Perceived Organizational Support (POS) Theory posits that teachers' commitment increases when they believe the institution values their contributions and cares about their well-being (Eisenberger et al., 1986). POS fulfills socio-emotional needs and strengthens affective and normative commitment, while also contributing to job satisfaction and performance (Rhoades & Eisenberger, 2002; Channuwong, 2015). Importantly, POS provides a direct theoretical basis for linking school climate and distributed leadership to organizational commitment, as both constructs reflect teachers' perceptions of institutional support.

In the context of Chinese higher education, these theoretical relationships are further shaped by cultural and institutional characteristics. Distributed leadership, which originates from Western participatory models, must operate within traditionally hierarchical organizational structures. Therefore, its impact on teachers' commitment is likely mediated through psychological mechanisms such as teacher efficacy and perceived organizational support rather than direct structural influence.

The authors synthesize these theoretical perspectives to construct an integrated conceptual model. The theories of Meyer and Allen (1991) provide the foundation for the dependent variable (organizational commitment), while Bandura's (1997) Social Cognitive Theory underpins the mediating role of teacher efficacy. Distributed leadership and school climate are positioned as key institutional-level variables, and teachers' individual characteristics represent internal drivers of behavior. This integration addresses a critical research gap, namely the lack of a validated model that explains how and why these variables interact within the under-researched context of universities in Yantai, China.

Conceptual Framework

Based on the research objectives and literature review, the conceptual framework proposes that organizational and individual factors influence teachers' organizational commitment both directly and indirectly through teacher efficacy as a mediating variable. Teacher efficacy is conceptualized as the central psychological mechanism through which institutional conditions are translated into commitment outcomes.

Accordingly, the following hypotheses are proposed:

H1: Teacher efficacy has a positive direct effect on teachers' organizational commitment.

H2: Distributed leadership has a positive direct effect on teachers' organizational commitment.

H3: Distributed leadership has a positive direct effect on teacher efficacy.

H4: School climate has a positive direct effect on teachers' organizational commitment.

H5: School climate has a positive direct effect on teacher efficacy.

H6: Teachers' individual characteristics have a positive direct effect on teachers' organizational commitment.

H7: Teachers' individual characteristics have a positive direct effect on teacher efficacy.

Furthermore, this study proposes that teacher efficacy mediates the relationships between distributed leadership, school climate, individual characteristics, and organizational commitment, forming a comprehensive causal structure.

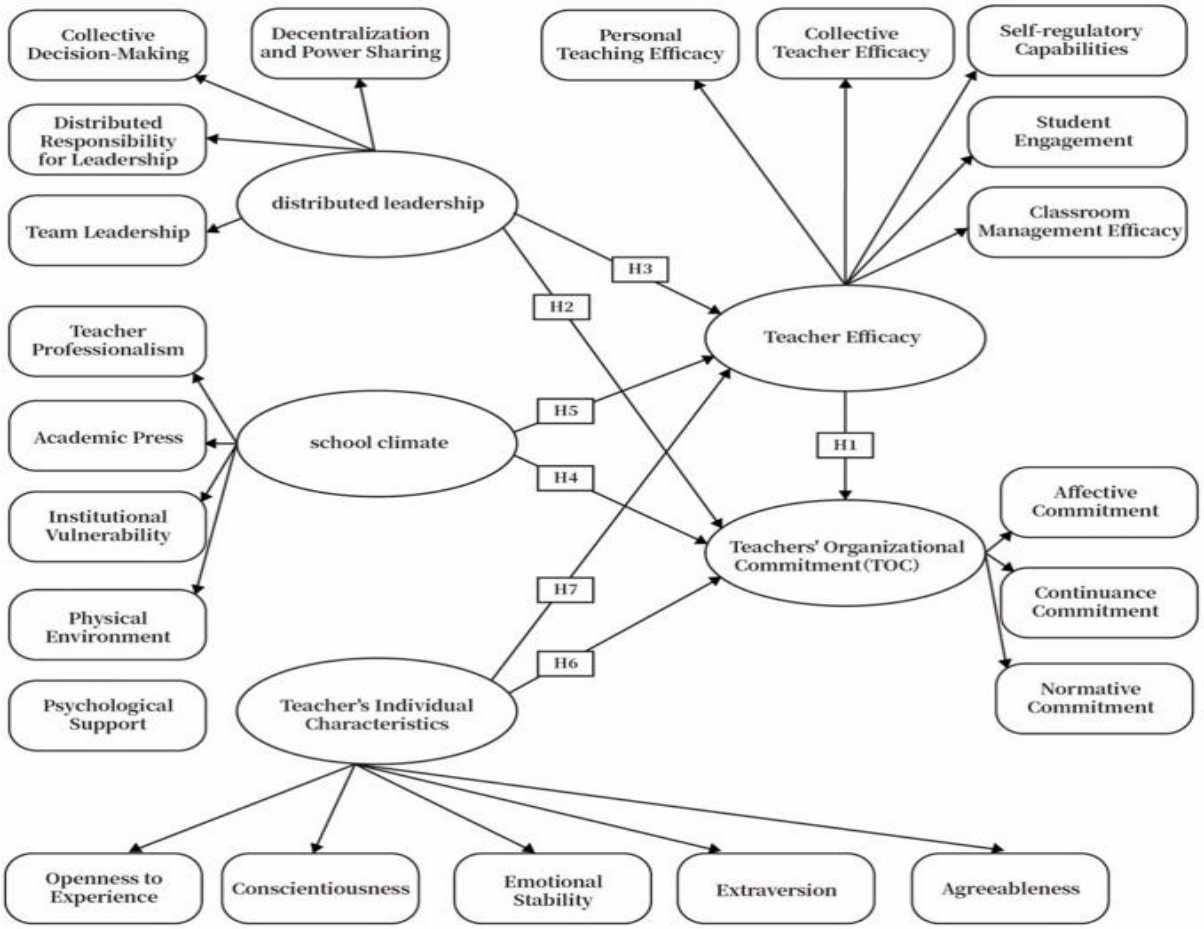


Figure 1 Conceptual Framework

Research Methodology

1. Research Design

This study employed an explanatory sequential mixed–methods design, consisting of two consecutive phases. In the first phase, quantitative data were collected and analyzed using Structural Equation Modeling (SEM) to examine the causal relationships among distributed leadership, school climate, teacher efficacy, individual characteristics, and teachers' organizational commitment. In the second phase, qualitative data were collected to explain and provide deeper insights into the quantitative findings. This design enabled both statistical validation and contextual interpretation of the proposed model.

2. Population and Sample

2.1 Population

The population of this study consisted of 7,901 faculty members and academic staff from six higher education institutions in Yantai City, Shandong Province, China, as of March 2025. These institutions represent diverse organizational types, including public undergraduate universities, private undergraduate universities, public vocational colleges, and joint education vocational colleges.

2.2 Quantitative Sample

A stratified random sampling technique was employed to ensure proportional representation across institutional types. The sample size was determined using SEM sample size guidelines (Soper, 2024), which indicated a minimum requirement of 376 respondents.

A total of 402 valid responses were obtained and retained for analysis, exceeding the minimum requirement and ensuring adequate statistical power for SEM.

The sample was proportionally distributed across institutional types, with respondents drawn from public undergraduate universities (n = 150), private undergraduate universities (n = 90), public vocational colleges (n = 100), and joint education vocational colleges (n = 62).

This stratified proportional sampling approach enhances sampling precision, minimizes selection bias, and strengthens the representativeness and external validity of the study.

2.3 Qualitative Sample

The qualitative phase involved 24 participants, including faculty members and academic administrators. Participants were selected using purposive sampling with maximum variation criteria, including years of teaching experience, academic rank, institutional type, and levels of organizational commitment.

This sampling strategy ensured the inclusion of diverse perspectives and enhanced the depth, credibility, and transferability of the qualitative findings.

2.4 Expert Group (Focus Group Discussion)

In the second phase of the study, 6–10 experts participated in focus group discussions (FGD) to validate and refine the proposed guidelines. The expert panel consisted of individuals with expertise in higher education management, academic administration, policy development, and research methodology.

The inclusion of expert validation strengthens the practical relevance and applicability of the proposed framework.

3. Research Instruments

3.1 Quantitative Instrument

The quantitative instrument consisted of a structured questionnaire comprising 42 items measured on a five-point Likert scale. The items were adapted from established theoretical frameworks related to organizational commitment, teacher efficacy, distributed leadership, and school climate. The instrument was localized for the Chinese higher education context using translation and back-translation procedures to ensure linguistic and conceptual equivalence.

3.2 Instrument Development and Validation

The questionnaire was adapted and localized for the Chinese higher education context using a translation and back-translation procedure to ensure linguistic and conceptual equivalence. Content validity was assessed using the Item–Objective Congruence (IOC) method, with all items exceeding the acceptable threshold of 0.50. A pilot study with 50 participants was conducted, resulting in the removal of items with low discrimination.

3.3 Reliability and Validity

Content validity was assessed using the Item–Objective Congruence (IOC) index, with all items exceeding the acceptable threshold of 0.50. Reliability and construct validity were confirmed through Cronbach's alpha coefficients ranging from 0.792 to 0.851, composite reliability (CR) values above 0.70, and average variance extracted (AVE) values exceeding 0.50, indicating satisfactory internal consistency and convergent validity.

3.4 Qualitative Instrument

Semi-structured interview guidelines were developed based on the conceptual framework. The interviews focused on exploring participants' perceptions of leadership, organizational climate, teacher efficacy, and organizational commitment.

Data were analyzed using content analysis supported by NVivo software, with coding categories aligned with the quantitative constructs to facilitate integration and triangulation.

4. Data Collection Procedures

Quantitative data were collected through both online and paper–based questionnaires. Ethical approval was obtained prior to data collection, and all participants provided informed consent.

Qualitative data were collected through in–depth interviews, which were recorded, transcribed, and analyzed systematically.

5. Data Analysis

Quantitative data were analyzed using SPSS, jamovi, and SEMLj. The analysis included descriptive statistics, Pearson correlation analysis, and Structural Equation Modeling (SEM). Model fit was evaluated using standard indices, including χ^2/df, Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR), following established guidelines.

6. Integration of Methods

The integration of quantitative and qualitative findings was conducted in the interpretation phase. The qualitative results were used to explain and contextualize the statistical relationships identified in the SEM analysis, thereby enhancing the overall validity and depth of the study.

7. Development of Guidelines

Based on the integrated findings, a set of practical guidelines was developed using the PDCA (Plan–Do–Check–Act) framework. These guidelines were validated through expert consultation and focus group discussions to ensure their relevance, feasibility, and applicability in higher education institutions.

Research Results

This Research Results findings obtained according to the objectives of the study, encompassing both quantitative and qualitative results to provide empirical and theoretical support for the development of the proposed model. The presentation of results is systematically divided into three main parts as follows

Part 1 Quantitative Research Findings

This section presents the quantitative findings in accordance with the research objectives, providing empirical evidence to support the proposed causal model. The analysis includes

descriptive statistics, measurement model evaluation, structural model assessment, and hypothesis testing.

According to established SEM guidelines, the sample size should be at least five to ten times the number of measurement items and not less than 100. The questionnaire in this study consisted of 44 items, and a total of 402 valid questionnaires were obtained, which satisfies the recommended criteria for Structural Equation Modeling (SEM). Data were analyzed using SPSS 26.0 and Smart–PLS.

Descriptive Statistics

Table 1 presents the demographic characteristics of the respondents (N = 402).

Table 1 Descriptive Statistics of Respondents (N = 402)

Demographic Information	Frequency (n)	Percentage (%)
Gender		
Male	177	44.0
Female	225	56.0
Age		
25–30 years	172	42.8
31–40 years	100	24.9
More than 40 years	130	32.3
Education Level		
Bachelor degree	159	39.5
Higher than bachelor degree	243	60.5
Working Experience		
0–10 years	311	77.3
10–20 years	59	14.7
More than 20 years	32	8.0
School Location		
Urban	301	74.9
Rural	101	25.1

A total of 402 respondents participated in the study. The sample was slightly female–dominated, with 56.0% female and 44.0% male participants. Most respondents were relatively young, with the largest proportion aged 25–30 years (42.8%). In terms of education, the majority held qualifications above a bachelor's degree (60.5%).

Regarding working experience, most respondents (77.3%) had 0–10 years of experience, indicating a predominance of early-career professionals. Additionally, 74.9% of respondents were employed in urban institutions, while 25.1% were from rural institutions.

Overall, the sample is characterized by young, well-educated teachers with relatively limited work experience, which should be taken into account when interpreting the findings, particularly in relation to organizational commitment and career stage.

Measurement Model

Convergent validity was assessed using Average Variance Extracted (AVE) and Composite Reliability (CR).

Table 2 Average Variance Extracted (AVE) and Composite Reliability (CR)

Factors	AVE	CR
Teacher efficacy	0.695	0.854
Distributed leadership	0.717	0.936
School climate	0.819	0.962
Teacher individual characteristics	0.711	0.954
Teachers' organizational commitment	0.638	0.962

The results indicate that all AVE values exceed 0.50 and all CR values exceed 0.70. This confirms that all constructs demonstrate satisfactory convergent validity and internal consistency, indicating that the measurement model is reliable and suitable for further analysis.

Structural Model Analysis

The structural model was used to examine the hypothesized causal relationships among the latent variables.

Table 3 Model Fit Indices of the Structural Model

Fit Index	Threshold	Observed Value
χ^2	–	967.671
df	–	892
χ^2/df	< 3	1.085
p-value	> .05	0.039
CFI	> .90	0.933
TLI	> .90	0.992
SRMR	< .08	0.033
RMSEA	< .06	0.015

The structural model demonstrated a good fit, with χ^2/df = 1.085, RMSEA = 0.015, SRMR = 0.033, CFI = 0.933, and TLI = 0.992. Although the chi-square p-value is less than 0.05, this is acceptable due to its sensitivity to large sample sizes, and the remaining indices indicate an overall good model fit.

Path Coefficient Analysis

Table 4 Path Coefficients

Dependent Variable	Independent Variable	B	S.E.	C.R.	P	β	R^2
TE	DL	0.162	0.053	3.07	0.002	0.166	0.231
	SC	0.105	0.053	1.956	0.050	0.100	
	TIC	0.320	0.051	6.240	< .001	0.352	
TOC	TE	0.233	0.051	4.545	< .001	0.246	0.349
	DL	0.172	0.048	3.582	< .001	0.187	
	SC	0.142	0.048	2.937	0.003	0.144	
	TIC	0.219	0.047	4.614	< .001	0.255	

Note: DL = Distributed Leadership; SC = School Climate; TIC = Teacher Individual Characteristics; TE = Teacher Efficacy; TOC = Teachers' Organizational Commitment.

The results indicate that distributed leadership, school climate, and teachers' individual characteristics significantly influence teacher efficacy. In addition, teacher efficacy, distributed leadership, school climate, and individual characteristics significantly influence organizational commitment.

Among these variables, teacher efficacy (β = 0.246) and teacher individual characteristics (β = 0.255) exert the strongest effects, highlighting the critical role of psychological and individual factors in shaping organizational commitment.

Hypothesis Testing

Table 5 Hypothesis Testing Results

Hypothesis	Path	β	p-value	Result
H1	TE ⟶ TOC	0.246	< .001	Supported
H2	DL ⟶ TOC	0.187	< .001	Supported
H3	DL ⟶ TE	0.166	0.002	Supported
H4	SC ⟶ TOC	0.144	0.003	Supported
H5	SC ⟶ TE	0.100	0.050	Supported
H6	TIC ⟶ TOC	0.255	< .001	Supported
H7	TIC ⟶ TE	0.352	< .001	Supported

All hypotheses were supported. These findings confirm that both organizational–level factors and individual–level factors significantly influence teachers' organizational commitment, both directly and indirectly through teacher efficacy.

Part 2: Qualitative Research Findings

Based on semi–structured interviews with 24 university teachers, thematic analysis identified five core themes influencing teachers' organizational commitment: school climate, organizational commitment, teacher efficacy, distributed leadership, and individual characteristics. These findings provide explanatory depth to the quantitative results by revealing the underlying psychological and contextual mechanisms shaping organizational commitment.

School climate emerged as the foundational context influencing commitment. Supportive interpersonal relationships, caring leadership, and positive teacher–student interactions foster emotional attachment and reduce work–related stress. Institutional factors such as transparent regulations, fair decision–making, adequate facilities, and flexible management further enhance trust and a sense of belonging. These findings explain the significant effects of school climate observed in the SEM analysis.

Organizational commitment reflects teachers' psychological bond with their institutions, consisting of affective and responsibility–based commitment. Affective commitment arises from emotional attachment to colleagues and students, while responsibility commitment is driven by professional mission and ethical responsibility. Together, these dimensions reinforce teachers' intention to remain and actively contribute to institutional development.

Teacher efficacy was identified as a key psychological mechanism linking institutional factors to organizational commitment. Teaching efficacy develops through pedagogical innovation, classroom management, and student outcomes, while research efficacy is strengthened when academic work aligns with institutional and societal needs. Teachers frequently reinterpret external performance pressures as intrinsic motivation through self–regulation, supporting the mediating role of teacher efficacy found in the quantitative results.

Distributed leadership enhances commitment by fostering collaboration, shared responsibility, and institutional responsiveness. Cross–departmental teamwork and supportive administrative practices strengthen trust and professional identity.

Finally, teachers' individual characteristics, including a strong sense of responsibility, adaptability, and innovation capability, serve as internal drivers of commitment. These characteristics enable teachers to cope with work pressures, sustain motivation, and maintain long-term engagement with their institutions.

Part 3: Guidelines for Enhancing Teachers' Organizational Commitment

Based on the integrated quantitative and qualitative findings, this study proposes a set of practical guidelines to enhance teachers' organizational commitment in higher education institutions in Yantai City. These guidelines are structured based on the key determinants identified in the causal model and supported by qualitative evidence.

First, institutions should strengthen school climate by promoting transparent governance, fair evaluation systems, and supportive working environments. Enhancing interpersonal relationships and organizational support can foster trust and emotional attachment among faculty members.

Second, teacher organizational commitment should be reinforced by developing both affective and responsibility-based dimensions. Institutional initiatives should emphasize professional identity, ethical responsibility, and alignment with organizational goals.

Third, improving teacher efficacy is essential. Universities should provide continuous professional development, mentorship programs, and opportunities for pedagogical and research innovation. Aligning research activities with teaching and institutional needs can further strengthen teachers' sense of competence and contribution.

Fourth, distributed leadership should be implemented through participatory decision-making and collaborative structures. Encouraging faculty involvement in institutional governance enhances ownership and collective identity.

Finally, institutions should support the development of individual characteristics, including adaptability, innovation, and self-management. Providing resources and training for coping with academic demands can sustain long-term commitment.

Overall, these guidelines highlight that organizational commitment can be effectively enhanced through the integration of institutional support, leadership practices, and individual development within a coherent and evidence-based framework.

Discussion

Causal Model of Teachers' Organizational Commitment

The results confirm that Teacher Efficacy (TE) has a significant and direct positive effect on Teachers' Organizational Commitment (TOC), supporting Hypothesis 1. This finding is consistent with prior research indicating that teachers who perceive themselves as competent are more likely to develop stronger emotional attachment and professional responsibility toward their institutions. Importantly, the present study further demonstrates that teacher efficacy functions as a central mediating mechanism through which organizational and leadership factors influence commitment.

Distributed Leadership (DL) was found to significantly influence both TOC and TE, supporting Hypotheses 2 and 3. These findings highlight the dual role of leadership as both a structural and psychological driver of organizational commitment. In the context of Chinese higher education, where hierarchical structures remain dominant, the effectiveness of distributed leadership reflects a shift toward participatory governance, which enhances teachers' sense of ownership and institutional belonging.

Similarly, School Climate (SC) exhibited significant positive effects on both TOC and TE, supporting Hypotheses 4 and 5. A supportive and transparent organizational environment fosters trust, reduces uncertainty, and enhances teachers' psychological safety. These findings align with the qualitative results, which indicate that school climate is perceived by teachers as a relational and emotional support system rather than merely an administrative structure.

Teachers' Individual Characteristics (TIC) also demonstrated significant effects on both TE and TOC, supporting Hypotheses 6 and 7. These results indicate that personal attributes such as motivation, experience, and adaptability play a critical role in shaping organizational commitment. Moreover, the indirect effect of TIC on TOC through TE further reinforces the importance of psychological mechanisms in the overall causal structure.

Taken together, the findings confirm that Teachers' Organizational Commitment is a multidimensional and context-dependent construct, shaped by the interaction of organizational, leadership, and individual factors. The integration of SEM and qualitative findings highlights that these relationships operate through psychological processes, particularly teacher efficacy, which acts as the key mechanism translating institutional conditions into sustained commitment.

Guidelines for Enhancing Teachers' Organizational Commitment

Based on the validated causal model, this study proposes a multidimensional framework for enhancing Teachers' Organizational Commitment through a continuous Plan–Do–Check–Act (PDCA) cycle. The framework translates empirical findings into actionable institutional strategies.

At the organizational level, TOC can be strengthened by establishing comprehensive support systems that integrate distributed leadership, equitable policies, and differentiated incentives. Such systems should prioritize both structural support and relational engagement to align individual goals with institutional missions.

Improving School Climate requires universities to develop transparent evaluation systems, promote interdisciplinary collaboration, and foster a culture of trust and respect. A positive organizational climate not only enhances job satisfaction but also indirectly strengthens commitment through increased teacher efficacy.

To enhance Teacher Efficacy, institutions should implement structured professional development programs that combine mentorship, targeted training, and reflective practice. These initiatives should focus on strengthening both teaching and research competencies while supporting teachers' ability to adapt to evolving academic demands.

Distributed Leadership should be operationalized through participatory governance mechanisms, enabling faculty involvement in decision–making processes. Such practices enhance teachers' sense of agency, responsibility, and professional identity, thereby reinforcing organizational commitment.

The PDCA cycle should be implemented as follows:

Plan: Develop strategic policies aligned with institutional goals

Do: Implement leadership, training, and support initiatives

Check: Evaluate outcomes using indicators such as retention rates, job satisfaction, and teaching performance

Act: Continuously refine policies based on empirical evidence and feedback

This iterative process ensures that institutional interventions remain adaptive, evidence–based, and responsive to the changing needs of faculty members.

New Knowledge from Research

Based on the literature review and empirical findings, this study contributes to the development of new knowledge regarding teachers' organizational commitment in higher education. Specifically, the findings demonstrate that school climate functions as a foundational

organizational condition that directly and indirectly enhances teachers' organizational commitment through psychological mechanisms.

Teacher organizational commitment reflects a multidimensional psychological bond between teachers and their institutions. This bond is composed of affective commitment, which arises from emotional attachment to colleagues, students, and the university, and responsibility–based commitment, which is driven by a sense of professional mission and ethical obligation. Together, these dimensions motivate teachers to remain in their institutions, actively contribute to organizational development, and sustain long–term engagement.

A key contribution of this study is the identification of teacher efficacy as a central mediating mechanism linking organizational and individual factors to organizational commitment. Teaching efficacy is developed through pedagogical innovation, effective classroom management, and student learning outcomes, while research efficacy is strengthened when scholarly activities are aligned with teaching practices and institutional or societal needs. This integration of teaching and research roles enhances teachers' confidence and reinforces their organizational commitment.

Furthermore, distributed leadership plays a critical role in strengthening organizational commitment by fostering collaboration, shared responsibility, and institutional responsiveness. Rather than functioning solely as a structural arrangement, distributed leadership operates as a relational and psychological support system that enhances teachers' sense of belonging and professional identity.

Overall, this study advances theoretical understanding by proposing an integrated causal framework in which school climate, distributed leadership, and individual characteristics influence organizational commitment through the mediating role of teacher efficacy. This framework highlights the dynamic interaction between organizational structures and psychological processes, particularly within the context of Chinese higher education.

Conclusion

This study successfully achieved its primary objective of validating a causal model of Teacher Organizational Commitment (TOC) among university faculty in Yantai, China, and identifying actionable mechanisms for its enhancement. Using an explanatory sequential mixed–methods design, the quantitative findings confirmed the proposed theoretical model with strong model fit indices, demonstrating that distributed leadership, school climate, teacher individual characteristics, and teacher efficacy collectively and significantly influence TOC.

Among these factors, teacher efficacy emerged as the strongest direct predictor, confirming its role as a central mediating mechanism linking organizational conditions and individual attributes to organizational commitment. The significant indirect effects further highlight that institutional and leadership variables exert their influence primarily through enhancing teachers' perceived competence, autonomy, and professional confidence.

The qualitative findings complemented and deepened the quantitative results by revealing that TOC is predominantly shaped by emotional attachment and a sense of professional responsibility. Faculty members emphasized the importance of collaborative work environments, equitable institutional practices, and supportive leadership in reinforcing these affective and normative dimensions of commitment. Importantly, qualitative evidence indicates that organizational factors are interpreted as relational and psychological support mechanisms rather than purely structural or external incentives.

Together, these findings suggest that TOC is not merely an outcome of isolated structural or individual factors but rather a dynamic and context-dependent construct formed through the interaction of leadership practices, organizational environment, and teachers' professional self-beliefs. This integrated perspective advances the understanding of organizational commitment within the context of Chinese higher education.

Building on these insights, the proposed PDCA cycle framework provides a systematic and practical approach for enhancing TOC in higher education institutions. By integrating strategic planning, targeted implementation, continuous evaluation, and adaptive improvement, the framework translates empirical findings into sustainable organizational practices. Specifically, the inclusion of measurable indicators in the "Check" phase and continuous feedback mechanisms in the "Act" phase ensures that institutional interventions remain responsive and evidence-based.

Theoretically, this study extends Social Exchange Theory and Perceived Organizational Support Theory by demonstrating how organizational commitment is shaped through the mediating role of teacher efficacy in a collectivist, non-Western context. Practically, the findings provide evidence-based guidance for university administrators and policymakers to design leadership strategies, improve organizational climate, and support faculty development.

Despite these contributions, the study is subject to certain limitations, including the cross-sectional design and reliance on self-reported data. Future research should incorporate longitudinal designs and objective institutional indicators, such as teacher retention rates and performance outcomes, to further validate and extend the proposed model.

Overall, this research contributes to both theory and practice by offering a comprehensive, empirically validated, and contextually grounded model to guide institutional policy and leadership development aimed at strengthening faculty commitment and enhancing organizational effectiveness in higher education.

Suggestions

Limitations. This study acknowledges three main limitations

This study acknowledges several limitations that should be considered when interpreting the findings.

Sample Scope: The geographic concentration of the sample, limited to six universities in Yantai City, may restrict the generalizability of the findings to other regions with different socioeconomic and institutional contexts. Future studies should consider broader and more diverse samples to enhance external validity.

Research Design: The cross-sectional research design captures relationships at a single point in time and, therefore, cannot fully establish causal inference or track the dynamic evolution of teachers' organizational commitment. Longitudinal designs are needed to better understand temporal changes and causal mechanisms.

Measurement Methods: The reliance on self-reported data may introduce common method bias (CMB). Although Harman's single-factor test was conducted, future research should employ more advanced techniques such as full collinearity VIF or marker variables to further control for CMB. Additionally, the inclusion of objective institutional indicators would strengthen the robustness of the model.

Practical Recommendations

Based on the findings, several practical recommendations are proposed to enhance teachers' organizational commitment in higher education institutions.

Organizational Commitment: Strengthen affective commitment through institutional culture and identity development, enhance normative commitment through professional ethics training, and improve continuance commitment by optimizing incentive and career progression systems.

School Climate: Prioritize psychological support systems, improve fairness and transparency in evaluation and promotion processes, and develop a collaborative academic environment that fosters trust and belonging.

Teacher Efficacy: Establish systematic professional development programs, including mentorship initiatives (e.g., "Teaching Master Studio"), targeted training, and reflective teaching practices to enhance both individual and collective efficacy.

Distributed Leadership: Promote participatory governance by implementing formal mechanisms that allow teachers to engage in decision-making processes and share leadership responsibilities. Such mechanisms should emphasize both structural participation and relational trust-building.

PDCA Implementation: These interventions should be implemented through a structured Plan–Do–Check–Act (PDCA) cycle.

Plan: Develop strategic policies and identify institutional priorities

Do: Implement training, leadership, and support initiatives

Check: Evaluate outcomes using measurable indicators such as teacher retention rates, job satisfaction, and teaching effectiveness

Act: Continuously refine strategies based on empirical evidence and feedback

Recommendations for Future Research

Future research should extend and deepen the current findings in several ways.

1. Expand Sample Scope: Increase the sample size and include multiple regions to enable cross-regional and multi-group comparisons, such as differences across institution types or academic disciplines.

2. Adopt Advanced Research Designs: Utilize longitudinal, experimental, or quasi-experimental designs to establish causal relationships and examine the dynamic nature of organizational commitment over time.

3. Integrate Multi-source Data: Combine subjective survey data with objective institutional-level indicators, such as teacher retention rates, research productivity, promotion timelines, and student evaluation scores, to enhance validity and reliability.

4. Incorporate Emerging Variables: Future studies should consider digital transformation and artificial intelligence (AI) as moderating variables influencing organizational commitment, particularly in the context of evolving higher education systems.

5. Conduct Action Research: Implement and empirically evaluate the proposed PDCA-based guidelines in real institutional settings to assess their effectiveness and refine policy interventions.

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