

Transformational leadership and innovation in Vietnamese higher education: The serial mediating roles of engagement and citizenship behaviour

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Orientation: The rapid expansion of higher education institutions in Vietnam has heightened competition and increased demands for high-quality human resources. Lecturers and administrative staff are required to continually enhance teaching, research and administrative skills. Transformational leadership is a key factor fostering such innovative capacities.

Research purpose: This study investigates the impact of transformational leadership on innovative work behaviour amongst lecturers and administrative staff in Vietnamese public universities, with a focus on mediating roles of work engagement and organisational citizenship behaviour (OCB).

Motivation for the study: Although transformational leadership has been studied in other organisational contexts, empirical evidence within higher education – particularly in Vietnam – remains limited. Clarifying its role in shaping innovative behaviours is vital to improving academic competitiveness.

Research approach/design and method: A quantitative survey of 374 lecturers and staff from Vietnamese public universities was performed using convenience sampling. Data were analysed by Partial Least Squares Structural Equation Modelling (PLS-SEM) to assess direct and mediating effects.

Main findings: Transformational leadership significantly improves work engagement ($\beta = 0.389, p < 0.05$), OCB ($\beta = 0.285, p < 0.05$) and innovative work behaviour ($\beta = 0.329, p < 0.05$). Both work engagement ($\beta = 0.122, p < 0.05$) and OCB ($\beta = 0.089, p < 0.05$) function as partial mediators.

Practical/managerial implications: The results suggest that strengthening transformational leadership practices fosters engagement, citizenship behaviours and innovation, thereby boosting institutional performance.

Contribution/value-add: Drawing on empirical evidence from Vietnam, this study highlights how transformational leadership promotes innovation through dual-mediating mechanisms and extends the literature on leadership and innovation in higher education.

Keywords: transformational leadership; work engagement; organisational citizenship behaviour; innovative work behaviour; public university.

Introduction

Employee performance is vital to organisational success. Eliyana et al. (2019) emphasise that this success is attained when leaders transform human resources into dependable assets. Leadership also plays a crucial role in cultivating strong ties between employees and organisations. By ensuring that employees feel valued and integral, leaders foster a sense of commitment and belonging (Amelia & Mulyono, 2024).

In highly competitive contexts, organisations often depend on transformational leadership to motivate staff to transcend personal interests. This leadership style encourages employees to shift their mindsets and values, encouraging them to exceed expected performance levels (Buil et al., 2019). Moreover, it strengthens an organisational environment supportive of innovation, thereby enhancing work engagement (WE), innovative work behaviour (IWB) and organisational citizenship behaviour (OCB) (Naqshbandi et al., 2019).

However, Jia et al. (2018) note that the specific 'black box' mechanism through which transformational leadership influences employees' innovative behaviour remains underexplored, specifically in developing countries such as Vietnam. Leadership alone is insufficient to achieve high performance and must be converted into tangible outcomes through psychological states and discretionary behaviours. This study posits that WE and OCB serve as these critical transmission mechanisms. Whilst WE reflects the intrinsic motivational state, OCB signifies the behavioural manifestation of social exchange. Despite their importance, few studies have modelled them as a serial chain (leadership -> engagement -> citizenship -> innovation) within the context of Vietnamese public universities, operating under unique constraints of autonomy and resources.

In an educational context, IWB is increasingly important with advances in technology and electronic practices (Jung et al., 2003). Education is considered a cornerstone of the national economy, particularly in developing countries such as Vietnam, as it fosters creativity and innovation amongst young people, thereby contributing to economic growth and social development. However, in public service units such as public universities, employee creativity has not been effectively utilised because of specific management mechanisms and fixed incomes, leading to a lack of work motivation (Nguyen & Luong, 2017). Therefore, promoting IWB in these units is crucial to improve work efficiency and contribute positively to the goal of sustainable development in education.

To address this gap, the current study integrates the job demands-resources (JD-R) model, social exchange theory (SET) and broaden-and-build theory to identify factors affecting IWB. Specifically, this research assesses the direct influence of transformational leadership and the mediating roles of WE and OCB amongst lecturers and administrative staff at public universities in Vietnam.

Literature review

Theoretical framework

To underpin the hypothesised relationships and explain the underlying mechanisms linking leadership to innovation, this study draws on three foundational theories: the JD-R model, SET and broaden-and-build theory.

The job demands-resources model

The JD-R model (Bakker & Demerouti, 2007) suggests that employee wellbeing and performance rely on job demands and job resources. Job resources denote physical, psychological, social or organisational aspects of the job accountable for reducing physiological and psychological costs, stimulating personal growth and helping achieve work goals. Within higher education, transformational leadership is regarded as a critical 'job resource'. By offering inspiration, intellectual stimulation and individual support, transformational leaders actively

replenish employees' psychological resources. According to the motivational process of the JD-R model, the accumulation of these resources directly fosters a state of WE, enabling employees to dedicate high levels of energy to their tasks. Recent empirical studies have reinforced this theoretical perspective, demonstrating that transformational leadership serves as a vital structural resource within the JD-R framework that directly mitigates job demands and fosters engagement (Breevaart & Bakker, 2017; Katou et al., 2022).

Social exchange theory

Whilst JD-R explains the energetic mechanism, SET (Blau, 1964) explains workplace behaviour through the principles of reciprocity. Social exchange theory suggests that social relationships depend on trust and indefinite obligations. When employees receive socio-emotional benefits, such as support, trust and vision, from their leaders, they develop a sense of obligation to repay the organisation. This repayment often manifests not just in meeting formal job requirements but in discretionary extra-role behaviours, specifically OCB. Furthermore, this supportive exchange relationship creates a psychological safety net that encourages risk-taking, a fundamental prerequisite for IWB.

The broaden-and-build theory

Although JD-R elucidates the generation of WE and SET clarifies the reciprocal nature of OCB, the broaden-and-build theory (Fredrickson, 1998, 2001) offers the necessary theoretical framework for linking positive psychological states to innovative outcomes. This theory indicates that positive emotions – such as the vigour and dedication inherent in WE – share the ability to 'broaden' an individual's momentary thought-action repertoire and 'build' their enduring personal resources. In this study, when lecturers and staff experience high levels of engagement, their cognitive scope expands, allowing them to make novel connections, explore new ideas and engage in creative problem-solving. Thus, broaden-and-build theory complements JD-R and SET by explaining the psychological mechanism through which energy (engagement) transforms into creativity (IWB).

Hypothesis development

Transformational leadership and employee outcomes

Transformational leadership includes four dimensions: idealised influence, inspirational motivation, intellectual stimulation and individualised consideration (Avolio et al., 1999; Bass, 1985). Within Vietnamese public universities, leaders with these traits act as change agents. By offering intellectual stimulation, they encourage staff to challenge traditional teaching methods and administrative procedures, thereby directly enhancing IWB (H3). Specifically in the higher education context, Mamo et al. (2025) found that leaders' vision encourages faculty to actively adopt new teaching methods.

Furthermore, acting as a resource (per JD-R theory), these leaders increase staff morale and dedication. When leaders display individualised consideration, paying heed to the specific needs of lecturers, they foster a higher level of WE (H1) (Monje-Amor et al., 2021). Empirical evidence from recent years consistently supports this link, showing that transformational leaders effectively cultivate employee vigour and dedication even in high-pressure environments (Katou et al., 2022; Lai et al., 2020). Simultaneously, using the norm of reciprocity (per SET), employees respond to such supportive leadership by engaging in OCB, such as helping colleagues and volunteering for extra duties without expecting immediate reward (H2) (Nohe & Hertel, 2017).

Based on this rationale, the following hypotheses are proposed:

H1: Transformational leadership has a positive relationship with work engagement.

H2: Transformational leadership has a positive impact on organisational citizenship behaviour.

H3: Transformational leadership has a positive and significant impact on innovative work behaviour.

The mediating role of work engagement

Work engagement is defined as a positive, fulfilling, work-related state of mind characterised by vigour, dedication and absorption (Rich et al., 2010; Schaufeli et al., 2002). Engaged employees possess high levels of energy and mental resilience. According to the broaden-and-build theory (Fredrickson, 2001), positive effects (such as engagement) broaden an individual's thought-action repertoire, encouraging novel thoughts and creative ideas, thus driving IWB (H5). Additionally, because engaged employees have an abundance of energetic resources (vigour), they are more likely to go beyond their formal roles to help others and contribute to the organisational social environment, thereby enhancing OCB (H4). Consequently, WE serves as an important psychological mediator, transmitting the effect of leadership to employee behaviours (H7).

Based on this rationale, the following hypotheses are proposed:

H4: Work engagement has a significant positive impact on employees' OCB.

H5: Work engagement has a positive impact on employees' innovative work behaviour.

H7: Work engagement mediates the relationship between (a) transformational leadership and OCB and (b) transformational leadership and IWB.

The mediating role of organisational citizenship behaviour

Organisational citizenship behaviour supports organisational effectiveness through voluntary behaviours not formally rewarded by the organisation (Organ, 1988). In a university setting, innovation is rarely a solitary act and requires collaboration, knowledge sharing and mutual support. Organisational citizenship behaviour encourages a cooperative climate that reduces interpersonal friction and facilitates the exchange of new ideas, thereby positively

influencing IWB (H6). Ocampo et al. (2018) highlighted that the cooperative nature of OCB acts as a 'social lubricant' that reduces the potential friction often associated with introducing new ideas, thereby providing the necessary social capital for innovation to flourish.

Furthermore, OCB acts as a behavioural bridge. Whilst leadership provides the resource (TRF) and engagement provides energy (WE), OCB offers the social capital necessary for innovation to occur. Therefore, OCB functions as a mediator linking the antecedents to the final outcome of innovation (H8, H9). This suggests a serial mediation path where leadership sparks engagement, engagement fuels citizenship behaviour and citizenship behaviour fosters an environment ripe for innovation.

Based on this rationale, the following hypotheses are proposed:

H6: Organisational citizenship behaviour has a positive influence on innovative work behaviour.

H8: OCB mediates the relationship between (a) transformational leadership and innovative work behaviour and (b) work engagement and innovative work behaviour.

H9: Work engagement (WE) and organisational citizenship behaviour (OCB) sequentially mediate the relationship between transformational leadership (TRF) and innovative work behaviour (IWB).

Based on the literature review, the proposed research model is developed to examine the relationships between the variables (Figure 1).

Research design

This study employs a quantitative research design using a cross-sectional survey approach. This method is appropriate for assessing the theoretical relationships between transformational leadership, WE and employee behaviours at a specific point in time. The collected data were analysed using partial least squares structural equation modelling (PLS-SEM), suitable for testing complex mediating effects with non-normal data distributions (Hair et al., 2021).

Sampling strategy and data collection

The target population involved lecturers and administrative staff working at public universities across Vietnam. Because of a lack of a centralised national database with the contact details of all university personnel in Vietnam, a probability sampling method (such as random sampling) was not possible. Consequently, *convenience sampling* was employed to access participants. In organisational research, a nonprobability sampling method is widely adopted when a sampling frame is unavailable, allowing for accessible data collection within time and resource constraints.

The questionnaires were distributed digitally via Google Forms through professional academic networks and social media groups dedicated to Vietnamese university staff. The data collection period lasted 4 months, from September

2024 to December 2024. A total of 500 questionnaires were distributed. Of these, 426 responses were received. Following a rigorous data screening process, 52 responses were excluded because of incompleteness or 'straight-lining' patterns (selecting the same option for all questions). Ultimately, 374 valid responses were retained for analysis, yielding an effective response rate of 74.8%. This sample size meets the recommended minimum for PLS-SEM analysis to achieve sufficient statistical power (Hair et al., 2021).

Measurement instruments

To ensure content validity, measurement scales were adapted from established studies in the field. All items were evaluated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Given the complexity of the serial mediation model and to ensure parsimony, a global unidimensional approach was adopted for the latent constructs. This decision is methodologically based on previous research suggesting that when subdimensions of a construct are highly correlated, they represent a single underlying higher-order latent factor; therefore, treating them as a composite score reduces issues of multicollinearity in structural equation modelling. Details of the measurement instruments, adapted from previous studies, are summarised in Table 1.

Transformational leadership (TRF)

Measured using a four-item global scale adapted from the Multifactor Leadership Questionnaire (MLQ) by Avolio et al. (1999). Whilst TRF is theoretically comprised of four dimensions (idealised influence, inspirational motivation, intellectual stimulation and individualised consideration), empirical studies have consistently shown high correlations amongst these dimensions, often failing to demonstrate discriminant validity between them (Carless, 1998; Tepper & Percy, 1994). Therefore, using a global measure captures the core essence of the construct whilst maintaining model parsimony.

Work engagement

This construct was assessed using a four-item global scale adapted from Rich et al. (2010). Sample items include 'I exert

my full effort to my job' and 'I feel energetic at my job'. Critically, although WE is traditionally considered as a multidimensional construct comprising vigour, dedication and absorption (Schaufeli et al., 2002), empirical evidence suggests that these dimensions are highly correlated and can be effectively aggregated into a higher-order factor (Schaufeli et al., 2006). Recent psychometric studies in Asian educational contexts, particularly in Vietnam, have demonstrated that the unidimensional structure is robust and appropriate for assessing faculty members (Tran et al., 2020; Wei et al., 2025). Consequently, a global unidimensional measure was selected for this study. This approach minimises respondent fatigue – a strategic priority given the length of the overall survey – whilst ensuring the instrument captures the core motivational state.

Organisational citizenship behaviour

Measured using five items adapted from Yoon & Suh (2003). Although OCB can be categorised into dimensions targeting individuals (OCB-I) or the organisation (OCB-O), this study focuses on the aggregate contribution of employees to the social and psychological environment. Thus, a unidimensional scale focusing on altruism and conscientious behaviours relevant to the university context was deemed appropriate to reflect the overall cooperative climate.

Innovative work behaviour

Measured using four items from Nguyen and Kien (2023), specifically validated for the Vietnamese context to capture the holistic process of idea generation and implementation.

Analytical methods

Using Smart PLS4 software, the current study analyses the data and test the research hypotheses. There are two steps for data analysis performed in the study including measurement model analysis and structural model analysis.

Ethical considerations

An ethical clearance waiver to conduct this study was obtained from Hong Duc University. The study was conducted in strict adherence to ethical standards for research involving human participants. Informed consent was obtained from all respondents; a cover letter accompanied the survey detailing the research objectives and proceeding with the questionnaire constituted consent. Participation was entirely voluntary, allowing respondents to withdraw at any time without penalty. Furthermore, anonymity and confidentiality were rigorously maintained, as no personally identifiable information (PII) such as names or employee IDs was collected. All data were stored securely and accessed solely by the research team for analysis purposes.

Results

Description of the research sample

The demographic profile of the respondents ($N = 374$) is summarised in Table 2. The sample was predominantly female

TABLE 1: Measurement scale.

No.	Constructs	Items	Sample items	References
1	Transformation leadership style	4	My leader seeks differing perspectives when solving problems My leader treats me as an individual rather than just a member of a group	Adapted from Avolio et al. (1999)
2	Work engagement	4	I exert my full effort to my job I feel energetic at my job	Adapted from Rich et al. (2010)
3	Organisational citizenship behaviour	5	I help others who have heavy workloads I am always ready to help those around me	Adapted from Yoon and Suh (2003)
4	Innovative work behaviour	4	I often generate original solutions for problems I transform innovative ideas into useful applications	Adapted from Nguyen and Kien (2023)

Note: Please see the full reference list of this article Le, T.N. (2026). Transformational leadership and innovation in Vietnamese higher education: The serial mediating roles of engagement and citizenship behaviour. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 24(0), a3326. <https://doi.org/10.4102/sajhrm.v24i0.3326>, for more information.

(71.93%), reflecting the gender distribution characteristic of the education sector in Vietnam. Regarding age structure, the largest cohort comprised individuals aged 40–50 years (45.19%), followed by the 30–40 years age group (39.30%). In terms of educational attainment, the respondents demonstrated a high level of qualification, with 65.51% holding a master's degree and 21.93% possessing a doctoral degree. This high qualification profile aligns with the target population of university lecturers and administrative staff, ensuring that the respondents possessed the cognitive capacity to comprehend the survey constructs.

Evaluation of the measurement model

The measurement model was evaluated by PLS-SEM via SmartPLS 4 software. To ensure the robustness of the constructs, the outer loadings, internal consistency reliability and convergent validity were assessed for all latent variables: transformational leadership (TRF), WE, OCB and IWB.

Reliability and validity analysis

A critical consideration in this study validated the measurement scales. Although the focal constructs – specifically transformational leadership, WE and OCB – were considered multidimensional, global unidimensional measures were utilised for the structural analysis. This methodological choice is supported by psychometric literature suggesting that when subdimensions of a construct exhibit high intercorrelations, they can be effectively aggregated into a single higher-order factor without compromising conceptual integrity. Furthermore, utilising global measures was deemed essential to maintain model parsimony and minimise respondent fatigue in the context of a complex serial mediation framework (Carless, 1998; Rich et al., 2010; Schaufeli et al., 2006).

As presented in Table 3, the results empirically support the reliability of the measurement instrument used in this study.

Indicator reliability

All individual item outer loadings exceeded a recommended threshold of 0.708 (Hair et al., 2021), ranging from 0.718 to 0.889. This indicates that the selected indicators share a

TABLE 2: Demographic respondents.

No.	Characteristics	Description	Frequency	%
1	Gender	Male	105	28.07
		Female	269	71.93
2	Age (years)	Under 30	34	9.09
		From 30 to 40	147	39.30
		From over 40 to 50	169	45.19
		Over 50	24	6.42
3	Education	Bachelor	25	6.68
		Master	245	65.51
		Doctor	82	21.93
		Associate professor	20	5.35
		Professor	2	0.53

substantial proportion of variance with their respective latent constructs.

Internal consistency

Cronbach's alpha values for all constructs ranged from 0.749 (IWB) to 0.858 (OCB), surpassing the 0.70 threshold. Furthermore, the composite reliability (ρ_A) values were all satisfactory ($\rho_A > 0.70$). Notably, high internal consistency was observed not only for WE ($\alpha = 0.819$) but also for transformational leadership ($\alpha = 0.822$) and OCB ($\alpha = 0.858$). These results confirm that the items within each scale converge strongly on a single latent factor, thereby empirically justifying the unidimensional operationalisation of these constructs in the structural model.

Convergent validity

The average variance extracted (AVE) for all constructs exceeded the 0.50 benchmark (TRF = 0.655; WE = 0.647; OCB = 0.639; IWB = 0.570). This confirms that the constructs explain more than half of the variance of their indicators on average.

Multicollinearity

The variance inflation factor (VIF) values for all indicators were below 3.0 (ranging from 1.359 to 2.823), indicating that collinearity was not a critical issue.

Discriminant validity assessment

Discriminant validity was assessed using the Heterotrait–Monotrait ratio of correlations (HTMT). As shown in Table 4, all HTMT ratios were below the conservative threshold of 0.85 (Henseler et al., 2015). This finding is crucial as it confirms that although transformational leadership, WE and OCB are theoretically related, they are empirically distinct constructs within the model.

Evaluating the coefficient of determination (R^2)

In structural models, the coefficient of determination (R^2) indicates how much variance in endogenous constructs is

TABLE 3: Measurement model factor loadings, α , C.R., AVE and VIF for multicollinearity.

Dimensions and related variables	Outer loading ranges	α	CR (ρ_A)	AVE	VIF range
Transformation leadership (TRF)	0.733–0.889	0.822	0.829	0.655	1.436–2.750
Work engagement (WE)	0.778–0.830	0.819	0.823	0.647	1.495–1.917
Organisational citizenship behaviour (OCB)	0.737–0.841	0.858	0.858	0.639	1.807–2.823
Innovative work behaviour (IWB)	0.718–0.777	0.749	0.751	0.570	1.359–1.513

AVE, average variance extracted; VIF, variance inflation factor; CR, composite reliability.

TABLE 4: Heterotrait–Monotrait ratio of correlations matrix coefficients.

Constructs	IWB	OCB	TRF	WE
IWB	-	-	-	-
OCB	0.678	-	-	-
TRF	0.725	0.444	-	-
WE	0.694	0.403	0.470	-

IWB, innovative work behaviour; OCB, organisational citizenship behaviour; TRF, transformational leadership; WE, work engagement.

explained by exogenous variables. Values closer to 1 denote stronger predictive accuracy, with thresholds of 0.75, 0.50 and 0.25 typically classified as substantial, moderate and weak, respectively (Hair et al., 2021).

As presented in Table 5, the model explains 53.0% of the variance in IWB ($R^2 = 0.530$), demonstrating substantial predictive power. Regarding OCB ($R^2 = 0.189$) and WE ($R^2 = 0.152$), the coefficients of determination values are modest yet statistically significant. In behavioural science research, where human attitudes are influenced by a complex array of dispositional and situational factors, such values are considered acceptable and meaningful (Hair et al., 2021). These results suggest that whilst transformational leadership is a critical antecedent, it operates as part of a broader ecosystem of influences on employee psychological states.

Structural model evaluation

The author performed the structural model path coefficient evaluation using the bootstrapping method with a sample size of $n = 5000$. The results are shown in Table 6, Table 7 and Figure 2.

Table 6 shows that all six direct hypotheses, from H1 to H6, are accepted ($p = 0.000 < 0.05$). As an exogenous variable, TRF has a statistically significant positive impact on WE, OCB and innovative work engagement (IWE), with the original sample structure coefficients being 0.389, 0.285 and 0.329, respectively. Work engagement is statistically significant and has a positive impact on OCB and IWE, with the impact level through the original sample structure coefficients being 0.235 and 0.313, respectively. Organisational citizenship behaviour has a significant positive influence on IWE, with a path coefficient of 0.313. According to Cohen's (1988), the effect sizes (f^2) for the relationships TRF $\rightarrow$ WE (0.179), TRF $\rightarrow$ IWB (0.181), WE $\rightarrow$ IWB (0.167) and OCB $\rightarrow$ IWB (0.169) are considered medium, whereas other relationships show small effect sizes ($F^2 < 0.15$).

TABLE 5: *R*-square.

Constructs	<i>R</i> -square	<i>R</i> -square adjusted
IWB	0.530	0.526
OCB	0.189	0.184
WE	0.152	0.149

IWB, innovative work behaviour; OCB, organisational citizenship behaviour; WE, work engagement.

TABLE 6: Direct effect.

Hypothesis	Relationships	<i>B</i>	<i>t</i> -value	<i>p</i> -value	Decision	F^2	Size-effect level
H1	TRF $\rightarrow$ WE	0.389	8.785	0.000	Accepted	0.179	Medium
H2	TRF $\rightarrow$ OCB	0.285	5.526	0.000	Accepted	0.085	Small
H3	TRF $\rightarrow$ IWB	0.329	7.335	0.000	Accepted	0.181	Medium
H4	WE $\rightarrow$ OCB	0.235	4.360	0.000	Accepted	0.058	Small
H5	WE $\rightarrow$ IWB	0.313	7.246	0.000	Accepted	0.167	Medium
H6	OCB $\rightarrow$ IWB	0.313	6.662	0.000	Accepted	0.169	Medium

IWB, innovative work behaviour; OCB, organisational citizenship behaviour; TRF, transformational leadership; WE, work engagement.

The results presented in Table 7 indicate that transformational leadership (TRF) exerts an indirect effect on IWB through WE, with a path coefficient of $\beta = 0.122$ and a statistically significant p -value ($0.000 < 0.05$). This finding confirms the mediating role of WE in the TRF–IWB relationship. In addition, TRF also shows a direct and significant influence on IWB ($\beta = 0.329$; $p = 0.000 < 0.05$), suggesting that WE serves as a partial mediator, thereby supporting hypothesis H7a. Similarly, hypothesis H7b is validated, as WE partially mediates the link between TRF and OCB (indirect $\beta = 0.092$; direct $\beta = 0.285$; $p = 0.000 < 0.05$). The analysis further reveals that OCB functions as a partial mediator between TRF and IWB (indirect $\beta = 0.089$; direct $\beta = 0.329$; $p = 0.000 < 0.05$), as well as between WE and IWB (indirect $\beta = 0.074$; direct $\beta = 0.313$; $p = 0.000 < 0.05$), thus supporting hypotheses H8a and H8b. Finally, WE and OCB jointly mediate the relationship between TRF and IWB, with an indirect coefficient of $\beta = 0.029$ (direct $\beta = 0.329$; $p = 0.000 < 0.05$), confirming hypothesis H9. Overall, the evidence demonstrates that all 11 proposed hypotheses are supported.

Discussion

The primary objective of this study was to unravel the mechanisms linking transformational leadership to IWB within Vietnamese public universities. By integrating the JD-R model, SET and broaden-and-build theory, the findings provide robust empirical evidence for a complex influence process involving both direct impacts and a serial mediation pathway through WE and OCB.

The primacy of transformational leadership: Resource and stimulus

The results unequivocally confirm that transformational leadership is the paramount driver of positive employee outcomes in higher education.

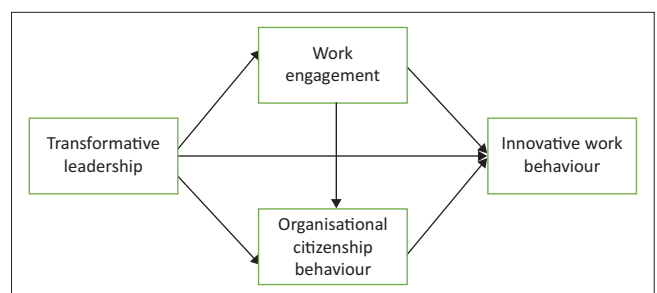
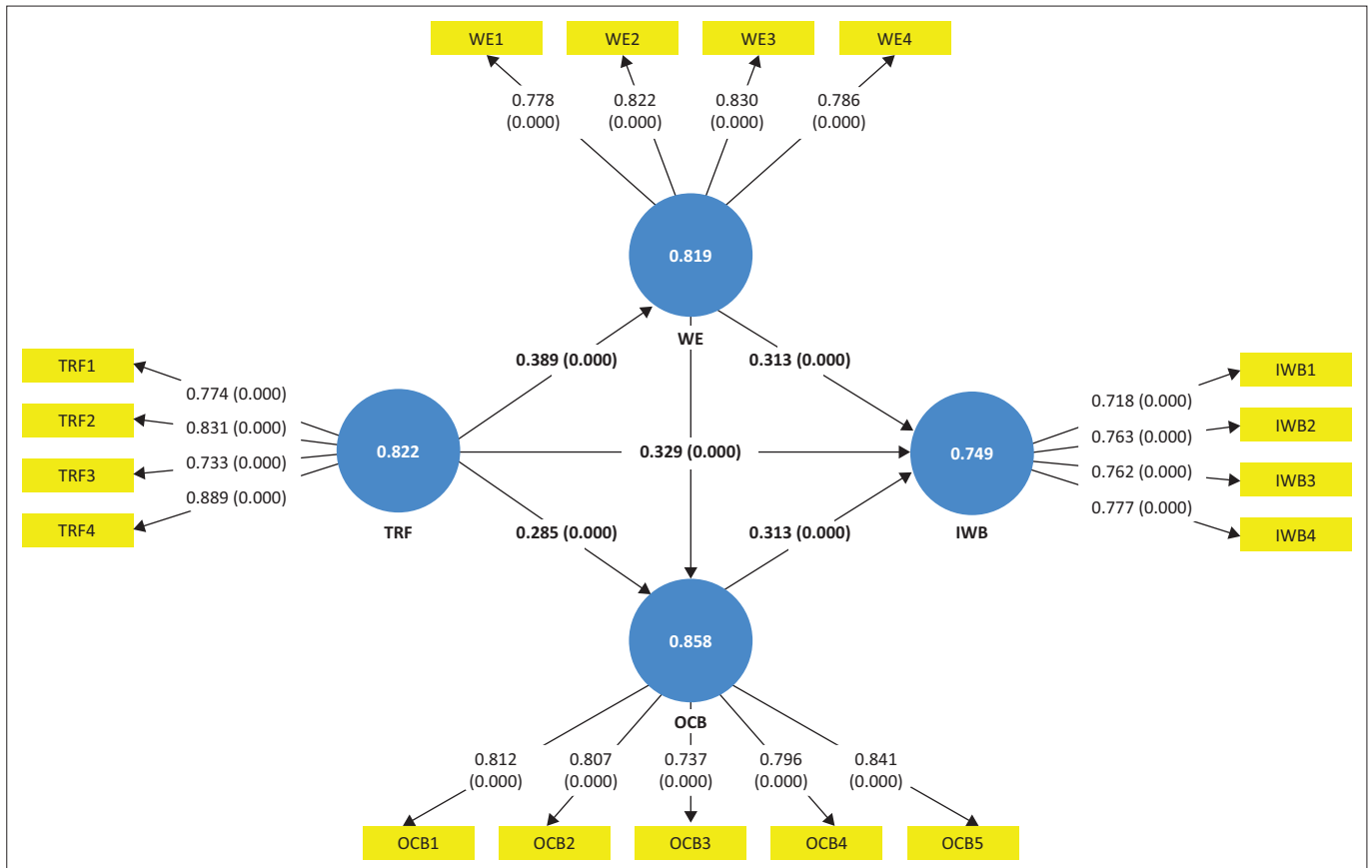


FIGURE 1: Conceptual framework.

TABLE 7: Specific indirect.

Hypothesis	Relationship	β	<i>t</i>	<i>p</i> -value	Decision
H7a	TRF $\rightarrow$ WE $\rightarrow$ IWB	0.122	5.221	0.000	Accepted
H7b	TRF $\rightarrow$ WE $\rightarrow$ OCB	0.092	3.779	0.000	Accepted
H8a	TRF $\rightarrow$ OCB $\rightarrow$ IWB	0.089	4.289	0.000	Accepted
H8b	WE $\rightarrow$ OCB $\rightarrow$ IWB	0.074	3.260	0.001	Accepted
H9	TRF $\rightarrow$ WE $\rightarrow$ OCB $\rightarrow$ IWB	0.029	3.008	0.003	Accepted

IWB, innovative work behaviour; OCB, organisational citizenship behaviour; TRF, transformational leadership; WE, work engagement.



IWB, innovative work behaviour; OCB, organisational citizenship behaviour; TRF, transformational leadership; WE, work engagement.

FIGURE 2: Research structural model.

Firstly, consistent with H1, leaders who exhibit idealised influence and inspirational motivation significantly enhance staff WE ($\beta = 0.389$). Interpreting this through the JD-R model, transformational leadership functions as a vital 'structural job resource' (Bakker & Demerouti, 2007). In the resource-constrained environment of Vietnamese public universities, these leaders function as a buffer against high job demands, actively replenishing the psychological resources of the staff and fuelling their dedication.

Secondly, beyond engagement, the study validates H2, showing that transformational leadership directly fosters OCB ($\beta = 0.285$). Drawing on SET, this relationship reflects the 'norm of reciprocity'. When lecturers perceive that their leaders care for their individual development (individualised consideration), they develop a sense of obligation to reciprocate, not just by doing their job, but by going above and beyond to help colleagues and the organisation (Nohe & Hertel, 2017).

Crucially, the study supports H3, revealing a strong direct impact of leadership on IWB ($\beta = 0.329$). This finding suggests that transformational leaders do more than just motivate; through intellectual stimulation, they actively challenge the status quo and create a 'psychological safety net'. This environment acts as a 'licence to innovate', empowering staff to propose novel teaching methods or administrative solutions without fear of criticism (Avolio et al., 1999; Bass, 1985).

Work engagement: The internal engine of benevolence and innovation

The study confirms that WE is not merely an isolated psychological state but a generative mechanism that drives tangible behaviours.

Supporting H5, the results show that engaged employees are significantly more innovative ($\beta = 0.313$). This aligns with the broaden-and-build theory (Fredrickson, 2001), suggesting that the positive effect inherent in engagement (vigour, dedication) 'broadens' an individual's cognitive repertoire, allowing them to make novel connections that disengaged employees might miss.

Furthermore, the study validates H4, demonstrating that WE significantly predicts OCB ($\beta = 0.235$). This finding is critical, as it illustrates a 'resource spillover' effect. Engaged employees possess an abundance of energetic resources; this surplus energy does not stay contained but spills over into extra-role behaviours, leading them to voluntarily assist co-workers and participate in university governance (Rich et al., 2010). Thus, engagement serves as the internal engine that powers both individual creativity (H5) and collective support (H4). These results corroborate the findings of Urbini et al. (2020), who concluded that engagement acts as a critical psychological catalyst, transforming energetic resources into discretionary behaviours beneficial to the organisation.

Organisational citizenship behaviour and the 'virtuous circle' of social exchange

A key contribution of this study is the validation of OCB as a bridge between engagement and innovation (H6, H8). Whilst engagement is an internal state, OCB is the external behavioural manifestation of that state within the social fabric of the organisation.

The strong positive relationship between OCB and IWB ($\beta = 0.313$, H6) suggests that innovation is deeply social. Innovation requires sharing unproven ideas, which is inherently risky. Organisational citizenship behaviour creates a cooperative, high-trust environment that reduces these social risks.

Consequently, the serial mediation path (H9: TRF $\rightarrow$ WE $\rightarrow$ OCB $\rightarrow$ IWB) illustrates a comprehensive process: Transformational leaders provide the resources (TRF) to ignite energy (WE); this energy fuels a supportive culture (OCB), which ultimately creates the conditions for innovation (IWB). This finding is particularly relevant in the Vietnamese context, where collectivist cultural values emphasise social harmony; a leader who fosters a culture of 'helping' effectively lays the groundwork for a culture of 'innovating'.

Practical implications

As Vietnamese public universities navigate the transition towards greater institutional autonomy, the findings of this study provide a strategic roadmap for enhancing organisational performance. The validation of the serial mediation model – whereby leadership fuels engagement, driving citizenship behaviour and innovation – suggests that administrative reforms must go beyond structural changes to address the psychological and behavioural dimensions of human resources.

Firstly, shifting the leadership paradigm is imperative. University administrations should move from a compliance-oriented management style to a transformational leadership approach. Consequently, professional development for deans and department heads must be restructured. Training curricula should prioritise competencies such as intellectual stimulation and individualised consideration. Leaders must act as 'resource providers' who actively replenish the psychological capital of their staff, thereby sustaining the high levels of vigour and dedication required for innovation.

Secondly, performance management systems require recalibration. Since OCB acts as the essential social lubricant for innovation, university policies should explicitly recognise and reward extra-role behaviours. Evaluation criteria, which traditionally favour individual academic output, should be broadened to include contributions to mentorship, knowledge sharing and collegial support. By legitimising

and valuing these cooperative behaviours, institutions can cultivate a 'high-trust' environment where the risks associated with proposing new ideas are mitigated.

Finally, to foster a climate of innovation, autonomy should be cascaded down to the individual level. Administrators should leverage the 'resource spillover' effect identified in this study by granting lecturers greater discretion in their teaching and research methods. When staff feel trusted and supported (via transformational leadership) and psychologically connected to their work (via engagement), they are naturally inclined to engage in the discretionary behaviours that drive institutional renewal.

Limitations and future research recommendations

Whilst this study offers valuable theoretical and practical insights, it is not without limitations. The use of a cross-sectional design constrains the ability to establish causal relationships, indicating that future research would benefit from longitudinal approaches. Moreover, the dependence on self-reported data may lead to potential biases, underscoring the need for more objective measures in subsequent investigations. Moreover, demographic factors influencing employees' creative behaviour were not examined and warrant further investigation. Finally, as the analysis focussed solely on transformational leadership, future studies should broaden the scope by exploring alternative leadership styles within higher education.

Conclusion

This research was motivated by the need to decode the 'black box' mechanism linking leadership to innovation within Vietnamese higher education. By integrating the job demands-resources model, SET and broaden-and-build theory, the study provides robust empirical evidence that transformational leadership is not a distal antecedent but a proximal driver of innovation, operating through a sequential chain of WE and OCB.

The study makes a distinct theoretical contribution by demonstrating that innovation is rarely a solitary act of genius but the outcome of a supportive social fabric. The findings confirm that whilst WE provides the internal energy for innovation, OCB offers the necessary social capital. Thus, transformational leaders act as catalysts igniting this dual process.

In educational reform, these results imply that the competitive advantage of Vietnamese public universities relies heavily on the quality of their human capital management. As institutions face increasing pressure to innovate in teaching and administration, the adoption of transformational leadership practices is no longer optional but essential. Ultimately, fostering a workforce that is both psychologically engaged and socially cooperative represents the most sustainable path to institutional excellence.

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Competing interests

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CRedit authorship contribution

Thi Nuong Le: Conceptualisation, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualisation, Writing – original draft, Writing – review & editing.

The author confirms that this work is entirely her own, has reviewed the article, approved the final version for submission and publication, and takes full responsibility for the integrity of its findings.

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Data availability

The data that support the findings of this study are available from the author upon reasonable request. Because of privacy and ethical restrictions, the data are not publicly available.

Disclaimer

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