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An Integrative Model for Developing Adaptive Performance of Study Program Coordinators in Vocational Higher Education

Pudji Herijanto*

*Department of Business Administration, State Polytechnic of Malang, East Java, Indonesia,
<https://orcid.org/0000-0001-9067-5105>*

Nilawati Fiernaningsih

*Department of Business Administration, State Polytechnic of Malang, East Java, Indonesia,
<https://orcid.org/0000-0002-0683-8416>*

Maskur

*Department of Business Administration, State Polytechnic of Malang, East Java, Indonesia,
<https://orcid.org/0000-0003-3272-1358>*

Rachma Bhakti Utami

*Department of Business Administration, State Polytechnic of Malang, East Java, Indonesia,
<https://orcid.org/0000-0002-9822-0700>*

***Correspondence email:** pudji.herijanto@polinema.ac.id.

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Abstract: This study pioneers an integrative theoretical model combining Social Exchange Theory (SET) and Self-Determination Theory (SDT) to explain adaptive performance in vocational education leadership, a previously unexplored domain. This study aims to develop an integrative model to enhance the adaptive performance of study program coordinators at vocational higher education institutions in East Java, Indonesia. The increasing complexity of vocational education requires adaptive leadership, as coordinators must respond effectively to dynamic institutional and environmental demands. A quantitative research design employing Partial Least Squares-Structural Equation Modelling (PLS-SEM) was used to examine the direct and indirect relationships among supervisory support, job autonomy, organisational citizenship behaviour (OCB), innovative work behaviour (IWB), and adaptive performance. Data were collected from 123 study program coordinators through structured questionnaires across various vocational institutions. The results indicate that supervisory support strongly enhanced OCB ($\beta = 0.842$, $p < 0.001$) but hurt adaptive performance ($\beta = -0.203$, $p < 0.05$). In contrast, job autonomy has a strong positive effect on both IWB ($\beta = 0.837$, $p < 0.001$) and adaptive performance ($\beta = 0.613$, $p < 0.001$) but does not significantly influence OCB. Furthermore, OCB positively contributes to adaptive performance ($\beta = 0.426$, $p < 0.001$), whereas IWB shows no significant direct impact. The model explains 44.6% of the variance in adaptive performance ($R^2 = 0.446$), indicating moderate explanatory power. Theoretically, this research extends SET by demonstrating that supervisory support enhances discretionary behaviour (OCB), while SDT explains how excessive supervision reduces autonomy and thus weakens adaptive performance. These findings highlight the complex interplay between contextual and psychological factors in influencing adaptive performance. From a practical perspective, institutions are encouraged to design leadership policies that strike a balance between supervisory guidance and autonomy, thereby preventing dependency and fostering adaptability. Encouraging OCB can strengthen team cohesion and adaptive capacity, while converting innovative behaviour into adaptive outcomes requires institutional learning support and open communication climates. Overall, this research makes clear theoretical contributions and provides specific, actionable recommendations for developing adaptive leadership in the vocational education sector.

Keywords: Supervisory Support, Job Autonomy, Organisational Citizenship Behavior, Innovative Work Behavior, Adaptive Performance, Vocational Higher Education.

Introduction

In the era of rapid digital transformation, higher education institutions are under increasing pressure to adapt curricula, operations, and leadership practices to meet the demands of Industry 4.0 and Society 5.0. In the Indonesian context, vocational higher education (VHE) is especially critical because it is expected to bridge the gap between theoretical knowledge and industry-relevant competencies, despite governmental efforts to strengthen vocational education, structural and operational barriers persist, including curriculum misalignments, weak institutional industry linkages, disparities in digital infrastructure, and uneven faculty capabilities, which are often cited in recent evaluations (Misbah et al., 2020; Putra & Marpanaji, 2025).

Regional evidence suggests the urgency is particularly acute in areas such as East Java. The presence of multiple state vocational institutions in the province highlights its strategic role in workforce development; however, unemployment among vocational school graduates remains a policy concern. Strengthening institutional performance within these VHEs is not merely an educational goal but also a socioeconomic necessity. Within these institutions, Study Program Coordinators play a critical role: they operationalise policies, coordinate with industry, guide faculty adoption of pedagogical innovations, and manage curriculum responsiveness. The capacity of study program coordinators to adapt and revise strategies, practices, and behaviours in response to evolving external pressures is therefore vital (Aryanti et al., 2025; Fuadiy et al., 2025).

Adaptive performance, defined as the ability to modify one's behaviour, strategies, and practices in changing environments, has been studied extensively in organisational and leadership research (Pelgrim et al., 2022). Its importance has also been emphasised in meta-analytic research linking leadership styles to adaptive performance outcomes (Bonini et al., 2024). Nonetheless, the application of adaptive performance constructs in academic leadership remains relatively rare (Pujianto & Haque, 2023) and underutilised in VHE contexts. While many studies examine singular antecedents (e.g., supervisory support, innovation), few integrate variables such as perceived supervisory support (PSS), organisational citizenship behaviour (OCB), innovative work behaviour (IWB), and religiosity into a unified explanatory framework.

This gap is consequential. Without understanding the combined effects and mechanisms of internal and external factors influencing adaptation, institutional reform efforts may remain fragmented or superficial. By focusing on study program coordinators in vocational higher education in East Java, this study aims to develop and empirically test an integrative model of adaptive performance. The model assesses how PSS, OCB, and IWB serve as antecedents, and how religiosity may moderate or mediate relationships, offering new insights into how adaptive capability emerges and can be cultivated in academic leadership settings.

Research Problem

Despite policy initiatives and strategic programs aimed at strengthening vocational higher education (VHE) in Indonesia, a significant gap persists between industry needs and graduates' competencies. Empirical studies show that curricula often lag behind technological and market developments, industry collaboration remains fragmented, and institutional leadership capacity is uneven across regions. According to the Central Statistics Agency (BPS, 2024), the unemployment rate among vocational school graduates in Indonesia reached 9.3%, the highest among all education levels, with East Java consistently ranking above the national average. This highlights that current VHE reforms have not yet produced graduates who meet the rapidly evolving demands of Industry 4.0 and Society 5.0.

This issue is critical at present because Indonesia's labour market transformation is accelerating, driven by automation, green economy transitions, and digitalisation, yet vocational institutions remain slow in aligning their curricula, leadership models, and adaptive capacities with these national priorities. In East Java, where multiple state vocational institutions play a strategic role

in industrial development, ineffective adaptation risks widening the skills mismatch and reducing youth employability.

Within VHE institutions, Study Program Coordinators play a role in ensuring the responsiveness of academic programs to labour market demands. However, their performance is frequently challenged by rapid technological changes, evolving government policies, and dynamic industry requirements. Their adaptive performance, defined as the capacity to modify strategies, behaviours, and practices in changing contexts, is therefore a decisive competency for sustaining institutional relevance and improving graduate employability.

While organisational research has identified several antecedents of adaptive performance, such as perceived supervisory support, organisational citizenship behaviour, and innovative work behaviour, the integration of these variables into a single explanatory model within the VHE context remains limited. Furthermore, the omission of cultural dimensions such as religiosity, which is highly salient in Indonesia's educational environment, restricts understanding of the motivational and ethical bases of adaptive behaviour.

Addressing this gap is socially beneficial, as enhancing the adaptive performance of vocational education leaders directly contributes to institutional resilience, labour market alignment, and national human capital competitiveness. Based on these conditions, the research problem can be formulated as follows: How can an integrative model combining organisational support, discretionary and innovative behaviours, and religiosity explain and enhance the adaptive performance of Study Program Coordinators in Indonesian vocational higher education institutions?

Research Focus

This research focuses on constructing and testing an integrative model of adaptive performance among Study Program Coordinators in Indonesian vocational higher education institutions. The study emphasises how perceived supervisory support (PSS), organisational citizenship behaviour (OCB), and innovative work behaviour (IWB) interact to shape adaptive performance amid digital transformation, evolving government regulations, and dynamic industry demands. By examining these variables simultaneously, the research aims to provide a comprehensive understanding of the organisational and behavioural determinants of adaptive performance in vocational education leadership.

In addition, this study highlights religiosity as a culturally embedded factor that may influence or moderate the relationship between organisational and behavioural antecedents and adaptive performance. Such an integrative approach is intended not only to fill theoretical gaps in the literature but also to provide practical guidance for institutional leaders and policymakers. Ultimately, the research aims to strengthen vocational higher education by fostering adaptive leadership capacities that ensure curriculum relevance, industry alignment, and improved graduate employability.

Research Aim and Questions

This study aims to develop and empirically test an integrative model of adaptive performance among Study Program Coordinators in Indonesian vocational higher education institutions. The research explores how perceived supervisory support, organisational citizenship behaviour, and innovative work behaviour influence adaptive performance, while also examining the role of religiosity as a contextual moderating factor. Guided by this aim, the study is directed by several core questions concerning the extent to which supervisory support, discretionary organisational behaviour, and innovative practices shape adaptive performance, how religiosity strengthens or alters these relationships, and how an integrative model combining these factors can provide a more comprehensive understanding of adaptive performance in vocational higher education leadership.

Literature review

Adaptive Performance in Vocational Higher Education

Adaptive performance refers to an individual's capacity to adjust effectively to dynamic work environments, solve novel problems, and maintain productivity under uncertain conditions (Pulakos et al., 2000). In the context of vocational higher education (VHE), adaptive performance is particularly critical for Study Program Coordinators, who must continuously respond to technological disruptions, evolving government policies, and shifting industry demands. Recent research emphasises that adaptive performance is not only a personal competency but also an organisational necessity to ensure curriculum relevance and institutional responsiveness in the era of Industry 4.0 and Society 5.0 (Bonini et al., 2024; Pelgrim et al., 2022).

Empirical studies further highlight the role of psychological and behavioural factors in shaping adaptive performance. For instance, (D. T. Javed et al., 2021) demonstrated that religiosity and innovative work behaviour significantly enhance adaptive capabilities, though their analysis primarily focused on employees in non-academic organisations. Similarly, (Azizah & Harsono, 2023) confirmed that Islamic work ethics and innovative behaviours positively influence adaptive performance, with this influence moderated by ethical leadership and organisational commitment. That adaptive expertise, developed through work-based learning, is central to sustaining adaptability in higher education contexts.

Despite these insights, research applying adaptive performance frameworks to VHE leadership remains scarce. Most studies concentrate on general workplace settings, leaving unanswered questions about how adaptive performance emerges among academic leaders, particularly Study Program Coordinators. Addressing this gap is crucial, as their ability to adapt strategies, practices, and behaviours directly determines how well vocational institutions align with industry needs and prepare graduates for the future workforce (Aryanti et al., 2025; Fuadiy et al., 2025).

Organisational Citizenship Behavior (OCB)

Organisational Citizenship Behaviour (OCB) refers to discretionary and voluntary actions that are not formally required by the job description but significantly contribute to organisational

effectiveness (Podsakoff et al., 2000). OCB encompasses behaviours such as assisting colleagues, addressing organisational issues beyond one's formal responsibilities, and demonstrating initiative in additional tasks. Research indicates that both individual and organisational factors can contribute to the promotion of OCB. For instance, religiosity can enhance OCB through person-organisation fit (Octaffiani & Violita, 2022), while supervisory support has been shown to indirectly increase OCB via participation in decision-making and job satisfaction (Salim & Yadav, 2012).

Despite these insights, the relationship between OCB and adaptive performance—defined as the ability to adjust and respond effectively to changing work conditions—remains underexplored, particularly among Study Program Coordinators in vocational higher education. Understanding how discretionary behaviours foster leadership effectiveness in dynamic educational settings can provide important implications for developing adaptive leadership and human resource strategies in vocational education institutions.

Innovative Work Behaviour (IWB)

Innovative Work Behaviour (IWB) encompasses the processes of generating, promoting, and implementing new ideas that benefit organisational performance (Scott et al., 1994). IWB requires not only individual creativity but also organisational support, including enabling leadership, an innovative culture, and supportive HR practices (De Jong & Den Hartog, 2010). (Kauppila, 2018) found that employees engaging in IWB receive higher supervisory performance ratings, particularly when leader-member exchange quality is high. Similarly, (Rumawas, 2024) highlighted the role of supportive HR practices in fostering IWB through the creation of a positive work environment. However, research examining IWB in academic and vocational institutions remains limited. Considering the urgent need for innovation in vocational education, for example, aligning curricula with Industry 4.0 and Society 5.0 demands investigating IWB among Study Program Coordinators is highly relevant. Such research can provide insights into how individual innovation contributes to adaptive and responsive vocational education strategies.

Perceived Supervisory Support (PSS)

Perceived Supervisory Support (PSS) refers to the extent to which supervisors provide care, encouragement, and recognition for employees' contributions (Kottke & Sharafinski, 1988). PSS has been shown to significantly enhance job satisfaction, organisational commitment, and OCB (Wang, 2014). In educational institutions, supportive supervisors empower academic leaders to take initiatives, embrace change, and improve adaptive performance. Nonetheless, empirical evidence on the role of PSS in shaping adaptive performance within vocational higher education leadership remains scarce. By integrating PSS into the research model, this study aims to investigate how supervisory support promotes adaptive, innovative, and discretionary behaviours among Study Program Coordinators, enabling educational organisations to respond effectively to curriculum changes and industry needs.

Religiosity in the Workplace

Religiosity reflects individuals' values, beliefs, and practices derived from their spiritual or religious orientations, which often shape workplace attitudes and behaviours (Dirkes & Weaver, 2016). Research suggests that religiosity can influence innovative behaviour and adaptive performance through mechanisms such as person-organisation fit and religious work ethics. For instance, (Masyhuri et al., 2021) found that workplace spirituality and perceived organisational support have a positive effect on IWB through person-organisation fit. (B. Javed et al., 2017) It was also found that Islamic work ethics positively influence both innovative work behaviour and adaptive performance. Conversely, (Benabou et al., 2015) cautioned that intense religiosity can, under certain conditions, hinder innovation due to dogmatic thinking or intolerance of new ideas. These mixed findings highlight the need to examine religiosity as both a motivator and a potential constraint on adaptive performance. In the context of Indonesian vocational higher education, where religiosity is a significant cultural and social factor, investigating its impact becomes particularly relevant for understanding the adaptive and innovative behaviours of Study Program Coordinators.

Research Methodology

General Background

This study aims to develop an integrative model for improving adaptive performance among study program coordinators at state vocational higher education institutions in East Java, Indonesia. The scope of the research focuses on identifying key factors, including supervisory support, job autonomy, organisational citizenship behaviour, innovative work behaviour, and adaptive performance. The methodological framework combines survey-based quantitative approaches to test the relationships among these variables using statistical modelling. PLS-SEM was chosen over CB-SEM due to the non-normal data distribution (Shapiro-Wilk test, $p < 0.05$) (Shapiro & Wilk, 1965) and the exploratory nature of the proposed theoretical model. By doing so, the research intends to provide both theoretical contributions to the field of vocational education management and practical insights for policy implementation in higher education governance.

Participants / Sample

The population of this study comprises all heads of study programs at state vocational higher education institutions in East Java, totalling 177 individuals. The research used simple random sampling, given the population's homogeneity. The sample size was determined using Slovin's formula with a 5% margin of error, resulting in 123 respondents. The response rate was 69.5%, exceeding the minimum acceptable threshold for academic survey research. This sample is considered adequate to represent the population and ensure statistical validity.

In addition, a priori statistical power analysis using G*Power 3.1 indicated that at least 119 respondents were required to detect a medium effect size ($f^2 = 0.15$) with $\alpha = 0.05$ and statistical power = 0.80 (Faul et al., 2009). Therefore, the sample of 123 respondents meets and slightly exceeds the minimum requirement for reliable model estimation.

Instrument and Procedures

The primary data were collected through a structured online questionnaire distributed via Google Forms. The questionnaire included items based on validated scales adapted from previous research, covering constructs such as supervisory support (Chen et al., 2016; Karim et al., 2025; Zeb et al., 2024), job autonomy (Han et al., 2025; Moreau et al., 2024; Wei et al., 2025), organizational citizenship behavior (Iqbal & Parray, 2024; McManus et al., 2025), innovative work behavior (Bos-Nehles et al., 2017; De Jong & Den Hartog, 2010; Khan et al., 2020), and adaptive performance (Marques-Quinteiro et al., 2015). Respondents were asked to provide their perceptions using a five-point Likert scale ranging from "strongly disagree" to "strongly agree." The instrument was pretested to ensure clarity, validity, and reliability before being distributed on a full scale.

To ensure content and construct validity, the instrument was reviewed by three subject matter experts in organisational behaviour and vocational education management. A pilot test involving 30 coordinators was conducted prior to the main data collection, yielding Cronbach's alpha values above 0.70 for all constructs, which confirmed internal reliability. Minor wording adjustments were made to enhance clarity and contextual relevance.

Data Analysis

The collected data were analysed using both descriptive and inferential statistics. Descriptive statistics were used to summarise respondents' characteristics and responses. For inferential analysis, the study employed Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 4.0 software. PLS-SEM was selected because it is robust for non-normal data, suitable for small to medium sample sizes, and appropriate for testing complex, exploratory models with multiple mediating paths.

The SEM process included model specification, identification, estimation, and evaluation of the goodness-of-fit using absolute, incremental, and parsimony indices (Hair et al., 2022). Bootstrapping with 5,000 resamples was used to assess the significance of path coefficients. When necessary, model respecification was conducted to improve fit and ensure the robustness of the findings.

Results

Demographic Characteristics of Respondents

Understanding the respondents' demographic characteristics is crucial for providing context for the study's findings. Demographics such as gender, age, educational qualifications, and years of service not only describe the profile of the respondents but also reflect the diversity and capacity of study program coordinators in vocational higher education institutions across East Java. These variables are essential to consider because they can influence leadership style, adaptive performance, and the ability to manage academic and institutional challenges.

Table 1

Demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage
Gender	Male	87	70.7%
	Female	36	29.3%
Age	< 30 years	7	5.7%
	31–40 years	39	31.7%
	41–50 years	52	42.3%
	51–60 years	25	20.3%
Education	Master's (S2)	101	82.1%
	Doctorate (S3)	22	17.9%
Years of Service	< 10 years	18	14.6%
	11–20 years	56	45.5%
	21–30 years	36	29.3%
	> 30 years	13	10.6%

The demographic profile of the 123 respondents reveals several noteworthy trends. In terms of gender, male coordinators dominate (70.7%), reflecting the broader pattern of male leadership prevalence in vocational higher education institutions in East Java. Regarding age, the largest group is between 41 and 50 years (42.3%), followed by those between 31 and 40 years (31.7%), suggesting that most respondents are in a productive age range with sufficient academic and managerial experience to support adaptive performance. Educational qualifications show that the majority hold a Master's degree (82.1%), while a notable 17.9% already possess a Doctorate, indicating a positive trend toward higher academic attainment in leadership roles. Finally, years of service data show that nearly half (45.5%) of respondents have 11–20 years of work experience, with an additional 29.3% having 21–30 years, indicating that most coordinators have significant institutional experience. Collectively, these characteristics underscore a mature, experienced, and relatively well-qualified respondent group, providing a strong basis for analysing adaptive performance in vocational higher education leadership.

Measurement Model

The measurement model was assessed through convergent validity, discriminant validity, and reliability analysis. All indicators demonstrated loading factors above the recommended threshold of 0.70, indicating strong convergent validity. Furthermore, composite reliability (CR) and Cronbach's alpha values were consistently above the 0.70 cutoff, confirming internal consistency reliability (Hair et al., 2022). These findings establish that the constructs in this study are both valid and reliable.

Table 2*Validity and reliability*

Variable	Dimension	Indicator	Loading Factor	Composite Reliability	Cronbach's Alpha
Supervisory Support	X1.1	X1.1.1	0.980	0.959	0.958
		X1.1.2	0.980		
	X1.2	X1.2.1	0.977	0.952	0.952
		X1.2.2	0.977		
	X1.3	X1.3.1	0.968	1.237	0.728
		X1.3.2	0.759		
	X1.4	X1.4.1	0.828	0.793	0.715
		X1.4.2	0.926		
Job Autonomy	X2.1	X2.1.1	0.901	0.751	0.748
		X2.1.2	0.886		
	X2.2	X2.2.1	0.905	0.782	0.782
		X2.2.2	0.907		
	X2.3	X2.3.1	0.912	0.771	0.762
		X2.3.2	0.884		
	X2.4	X2.4.1	0.883	0.744	0.741
		X2.4.2	0.900		
Organizational Citizenship Behavior	Y1.1	Y1.1.1	0.940	0.860	0.857
		Y1.1.2	0.930		
	Y1.2	Y1.2.1	0.975	0.948	0.948
		Y1.2.2	0.975		
	Y1.3	Y1.3.1	0.903	0.759	0.758
		Y1.3.2	0.891		
	Y1.4	Y1.4.1	0.866	0.995	0.813
		Y1.4.2	0.958		
Innovative Work Behavior	Y2.1	Y2.1.1	0.722	0.721	0.705
		Y2.1.2	0.799		
		Y2.1.3	0.853		
	Y2.2	Y2.2.1	0.744	0.875	0.870
		Y2.2.2	0.748		
		Y2.2.3	0.735		
		Y2.2.4	0.886		
		Y2.2.5	0.813		
		Y2.2.6	0.747		

Variable	Dimension	Indicator	Loading Factor	Composite Reliability	Cronbach's Alpha
	Y2.3	Y2.3.1	0.761	0.707	0.703
		Y2.3.2	0.834		
		Y2.3.3	0.780		
	Y2.4	Y2.4.1	0.819	0.868	0.829
		Y2.4.2	0.881		
		Y2.4.3	0.880		
Adaptive Performance	Y3.1	Y3.1.1	0.898	0.778	0.777
		Y3.1.2	0.910		
	Y3.2	Y3.2.1	0.904	0.736	0.724
		Y3.2.2	0.865		
	Y3.3	Y3.3.1	0.895	0.732	0.730
		Y3.3.2	0.879		
	Y3.4	Y3.4.1	0.968	0.941	0.915
		Y3.4.2	0.952		

The results in Table 2 demonstrate that all constructs meet the requirements of convergent validity, with loading factors well above the 0.70 threshold, except for a few indicators (e.g., X1.3.2, Y2.1.1, and Y2.2.3) that are still acceptable for exploratory research. In addition, the CR and Cronbach's alpha values of all constructs exceeded 0.70, confirming that each construct achieves sufficient internal consistency. Therefore, the measurement model is considered robust and provides a strong foundation for further structural model testing.

Evaluation of the Structural Model

The evaluation of the structural model was conducted to measure and explain the relationships among the latent variables. Following the guidelines of (Ghozali & Latan, 2014), the predictive power of the model was assessed using the coefficient of determination (R^2) and predictive relevance (Q^2). The R^2 values represent the proportion of variance explained by the exogenous variables, where thresholds of 0.67, 0.33, and 0.19 are considered strong, moderate, and weak, respectively.

Table 3

R-Square (R^2) and Adjusted R-Square Values

Variable	R^2	Adjusted R^2	Interpretation
Organizational Citizenship Behavior (Y1)	0.714	0.710	Moderate
Innovative Work Behavior (Y2)	0.693	0.688	Substantial
Adaptive Performance (Y3)	0.446	0.427	Substantial

The results in Table 3 indicate that the R^2 value for Organisational Citizenship Behaviour (0.714) suggests a strong explanatory power, meaning that exogenous variables account for 71.4% of its variance. In comparison, the remaining 28.6% is influenced by other factors outside the model. Similarly, Innovative Work Behavior has an R^2 value of 0.693, also categorised as strong, indicating that the exogenous variables account for 69.3% of the variance. Meanwhile, Adaptive Performance has an R^2 value of 0.446, which falls within the moderate category, indicating that the model explains 44.6% of the variance. In comparison, the remaining 55.4% is attributed to other factors not included in this study. Overall, the results demonstrate that the research model has a good level of predictive capability, particularly for Organisational Citizenship Behaviour and Innovative Work Behaviour, with moderate explanatory power for Adaptive Performance.

Hypothesis Testing

Direct effect testing was conducted to examine whether exogenous variables have a direct influence on endogenous variables. This test was carried out using path coefficients and p-values. A negative path coefficient indicates a negative relationship, while a positive value reflects a positive relationship. Moreover, if the p-value ≤ 0.05 ($\alpha = 5\%$), the effect is considered statistically significant. The results of the direct effect hypothesis testing are presented in Table 4.

Table 4

Hypothesis Test Results

Hypothesis	Path Coefficient	SE	T Statistics	P Values	Conclusion
Supervisory Support (X1) → Organizational Citizenship Behavior (Y1)	0,842	0,042	19,921	0,000	Support
Supervisory Support (X1) → Innovative Work Behavior (Y2)	-0,030	0,055	0,541	0,294	Not Support
Supervisory Support (X1) → Adaptive Performance (Y3)	-0,203	0,118	1,716	0,043	Support
Job Autonomy (X2) → Organizational Citizenship Behavior (Y1)	0,018	0,060	0,296	0,384	Not Support
Job Autonomy (X2) → Innovative Work Behavior (Y2)	0,837	0,037	22,609	0,000	Support
Job Autonomy (X2) → Adaptive Performance (Y3)	0,613	0,141	4,341	0,000	Support
Organizational Citizenship Behavior (Y1) → Adaptive Performance (Y3)	0,426	0,123	3,461	0,000	Support
Innovative Work Behavior (Y2) → Adaptive Performance (Y3)	-0,046	0,118	0,392	0,348	Not Support

The results demonstrate that Supervisory Support (X1) has a strong and significant positive effect on Organisational Citizenship Behaviour (Y1), but shows a negative and significant impact on Adaptive Performance (Y3). Its influence on Innovative Work Behaviour (Y2) is not significant.

Conversely, Job Autonomy (X2) has a significant and positive effect on both Innovative Work Behaviour (Y2) and Adaptive Performance (Y3), although its relationship with OCB (Y1) is not statistically significant. Furthermore, OCB (Y1) significantly enhances Adaptive Performance (Y3), whereas IWB (Y2) does not exhibit a meaningful contribution. Overall, these findings suggest that supervisory support is more crucial in shaping organisational citizenship behaviour, while job autonomy is a stronger predictor of innovation and adaptive performance among vocational higher education leaders.

Discussion

The findings of this study reveal several important insights into the relationships between supervisory support, job autonomy, organisational citizenship behaviour (OCB), innovative work behaviour (IWB), and adaptive performance among vocational higher education leaders. First, supervisory support was found to have a strong and significant positive effect on OCB, suggesting that when employees perceive high levels of support from their supervisors, they are more likely to engage in extra-role behaviors that benefit the organization. This is consistent with social exchange theory (Blau, 1964), which posits that employees reciprocate supportive treatment with voluntary contributions. Prior studies (Abbasi et al., 2021; Abdullah & Wider, 2022; Qadri et al., 2025; Syed et al., 2023) reinforce this finding by highlighting that supervisory support fosters a culture of collaboration, enhances self-efficacy, and strengthens employees' willingness to contribute beyond their formal roles. This alignment with earlier findings suggests that perceived supervisory support remains a fundamental mechanism for promoting positive organizational behavior in both private and educational settings.

However, supervisory support did not show a significant direct effect on innovative work behavior. This suggests that while supervisors can provide encouragement, innovation requires additional organizational conditions such as empowerment, tolerance for failure, and a supportive culture (De Jong & Den Hartog, 2010). Other research (Afsar et al., 2014; Çetinkaya & Yeşilada, 2022; Sijbom et al., 2025) underscores the role of mediators such as psychological empowerment, affective commitment, and innovation climate in bridging the gap between supervisory support and innovative behavior. In contrast, some studies (Khan et al., 2020; Rumawas, 2024) found that supportive leadership directly enhances innovation, which implies that contextual factors—such as organizational hierarchy or risk tolerance—may explain the differing outcomes. Thus, supervisory support should be seen as a contextual factor that works in tandem with psychological and organizational mechanisms to effectively stimulate innovation.

An unexpected finding of this research was the negative and significant effect of supervisory support on adaptive performance. This counterintuitive result highlights the risk of overprotective supervision, which can undermine employees' autonomy, initiative, and problem-solving skills (Pandey et al., 2018; Park & Park, 2019). When employees become overly dependent on supervisory direction, their ability to adapt to dynamic conditions is reduced. This resonates with self-determination theory (Deci & Ryan, 1985), which emphasises the need for autonomy and competence in fostering adaptability. An alternative explanation may lie in the cultural characteristics

of vocational institutions in Indonesia, where hierarchical structures and high power distance can create dependency on authority figures, thereby constraining adaptive behaviour despite supervisors' good intentions. Therefore, while supervisory support is valuable, it must be balanced with sufficient autonomy to encourage proactive adjustment to change.

In contrast, job autonomy demonstrated a robust influence on several outcomes. Although job autonomy did not significantly enhance OCB, this finding aligns with research suggesting that autonomy primarily strengthens intrinsic motivation and well-being rather than extra-role behaviors unless mediated by job satisfaction, engagement, or supportive leadership (Chiniara & Bentein, 2016; Juyumaya et al., 2024; Lee et al., 2024). Nevertheless, job autonomy strongly and positively influenced both IWB and adaptive performance. Autonomy provides employees with the flexibility to explore creative solutions, engage in job crafting, and respond to new challenges effectively (Marques-Quinteiro et al., 2015; Pulakos et al., 2000; Tims et al., 2015). This finding is consistent with (Han et al., 2025), who reported that autonomy enhances green creativity under supportive leadership, reinforcing the universal value of autonomy in fostering innovation across sectors. These findings emphasise the central role of autonomy in enabling innovative and adaptive capabilities within higher education institutions.

The study also confirmed that OCB significantly enhances adaptive performance, indicating that employees who voluntarily assist colleagues, maintain supportive attitudes, and actively contribute to collective goals are better equipped to handle organisational change. Prior studies (Klotz et al., 2018; Liu et al., 2024; Podsakoff et al., 2000) similarly demonstrated that OCB fosters resilience, strengthens social capital, and improves employees' responsiveness to dynamic work environments. This suggests that OCB acts as a social glue, enhancing coordination and collective adaptability within vocational education teams. By contrast, IWB did not show a direct effect on adaptive performance. This result supports the notion that innovation and adaptation are distinct processes, with innovation focusing on idea generation and implementation, while adaptation emphasises coping with unexpected challenges (De Jong & Den Hartog, 2010). Evidence from Cai et al. (2019), Messmann & Mulder (2014), and Yuan & Woodman (2010) (Cai et al., 2019; Messmann & Mulder, 2014; Yuan & Woodman, 2010) further indicates that the link between innovation and adaptation is often mediated by organisational learning and knowledge-sharing mechanisms. An alternative interpretation is that innovative efforts in vocational institutions are often constrained by rigid administrative procedures, limiting their translation into adaptive outcomes. Long-term organisational learning mechanisms are therefore necessary to convert innovation into adaptability.

Taken together, these findings highlight that supervisory support plays a dual role, fostering OCB but potentially hindering adaptive performance if applied excessively. In contrast, job autonomy emerges as a critical driver of both innovation and adaptability. Furthermore, while OCB has a direct and positive impact on adaptive performance, IWB requires mediating conditions to translate into adaptive outcomes. From a practical perspective, these results provide implications for multiple stakeholders. For institutional leaders, the study suggests striking a balance between supportive supervision and sufficient autonomy to prevent dependency. For academic coordinators, fostering OCB through peer collaboration can strengthen collective resilience. For policymakers and

higher education administrators, the findings underscore the importance to designing leadership development programs that foster autonomy-supportive supervisory practices and integrate innovation into institutional learning frameworks.

Conclusions and Implications

The key finding of this study is that excessive supervisory support paradoxically reduces adaptive performance, underscoring the need for institutions to strike a balance between support and autonomy. Supervisory support indeed fosters organisational citizenship behaviour (OCB) but may hinder adaptive capability when applied too intensively, whereas job autonomy consistently strengthens both innovative work behaviour (IWB) and adaptive performance. These findings underscore that effective leadership in vocational higher education requires both structure and flexibility to sustain performance in dynamic environments.

From a practical perspective, vocational higher education institutions should adopt leadership strategies that encourage autonomy-supportive supervision and empower coordinators to make adaptive decisions. Concrete action plans include: (1) developing leadership training programs that emphasise balancing guidance with independence; (2) integrating indicators of OCB, innovation, and adaptability into staff performance evaluations; (3) establishing regular reflective dialogue between supervisors and coordinators to review decision-making autonomy; and (4) creating institutional learning forums that promote knowledge-sharing and collective problem solving. These initiatives can strengthen institutional resilience, encourage proactive behaviour, and translate innovation into sustainable adaptive performance.

From a theoretical standpoint, this study advances organisational behaviour research by illustrating the paradoxical nature of supervisory support, which is beneficial for fostering OCB yet potentially detrimental to adaptive outcomes when excessive, and by reaffirming the critical role of autonomy in promoting innovation and adaptability. The clear takeaway message is that sustainable adaptability in vocational higher education leadership depends on equilibrium: institutions must strike a balance between supportive supervision and sufficient autonomy to cultivate creative, competent, and resilient leaders.

Suggestions for Future Research

Although this study provides valuable contributions, several limitations open avenues for further inquiry. First, the research focused exclusively on heads of study programs at vocational higher education institutions in East Java, which may limit the generalizability of the findings across different cultural, organisational, or national contexts. Future studies should consider comparative analyses across regions and institutional types to uncover potential contextual differences. Second, the study employed cross-sectional data, which restricts the ability to establish causal relationships. Longitudinal or experimental designs could provide deeper insights into how supervisory support and autonomy dynamically influence innovative and adaptive behaviours over time.

Additionally, while this study examined direct effects, future research could integrate mediating and moderating variables, such as psychological empowerment, organisational learning, or affective commitment, to better explain the mechanisms linking leadership practices with performance outcomes. Exploring the role of digital transformation and technological readiness in moderating these relationships would also be relevant, given the rapid evolution of higher education in the digital era. Lastly, qualitative approaches, such as case studies or in-depth interviews, could enrich understanding by capturing nuanced perspectives of leaders and staff on how supervisory support and autonomy are experienced in practice. By addressing these directions, future research can further refine theoretical models and provide actionable insights for strengthening innovation, collaboration, and adaptability within educational organisations.

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Conflict of Interest

None

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