

Impact Mechanism of Openness to Digital Transformation on Employees' Adaptive Performance: A Moderated Mediation Model

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ABSTRACT

The global wave of digital transformation brings new opportunities and challenges for employees' adaptive performance. Drawing on Conservation of Resources theory and Social Cognitive Theory, this study examines how employees' openness to digital transformation affects adaptive performance and the mechanisms at play. Using questionnaire data from 431 employees in typical digital transformation industries in Guangdong Province, we conduct an empirical analysis. The results show that openness to digital transformation has a significant positive effect on adaptive performance. Job crafting mediates the relationship between openness to digital transformation and adaptive performance. Further, learning goal orientation positively moderates the link between openness to digital transformation and job crafting, strengthening the indirect effect of openness on adaptive performance through job crafting. In sum, there is a moderated mediation effect.

Keywords: Openness to digital transformation; Employees' adaptive performance; Job crafting; Learning goal orientation

INTRODUCTION

Digital transformation has become a strategic necessity for enterprises pursuing high-quality development. A key concern for both scholars and practitioners is how to enhance employees' adaptive performance during this transformation process (Aliyari, 2024). As the global wave of digitalization continues to reshape industries, organizations are operating in increasingly dynamic, complex, and uncertain environments (Teece, 2018), placing greater demands on employees' adaptability. Although digital transformation represents a profound shift driven by digital technologies, it is ultimately a people-centered process (Gustomo et al., 2022). Employees' ability to adapt to digital change largely determines the effectiveness of technology adoption and the success of organizational transformation initiatives. However, existing studies have mainly focused on personal resources such as psychological capital (Dewi & Soeling, 2024) and resilience (Sanhokwe, 2023) in explaining adaptive performance, while relatively overlooking employees' openness to digital transformation. Openness to digital transformation reflects an individual's psychological and cognitive willingness to embrace digital change. It serves as the foundation for proactive adaptation to digital environments and represents an intrinsic motivational factor influencing adaptive performance (Malek et al., 2023). Therefore, identifying how to enhance

employees' openness to digital transformation to improve their adaptive performance has become an important and pressing issue in both theory and practice.

In studies on the factors influencing employees' adaptive performance, proactive behavior has been recognized as an important contributor (Vakola et al., 2022; Li et al., 2025). Within the context of digital transformation, scholars have identified job crafting as a key proactive approach through which employees adjust their work to adapt to environmental changes (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001). Empirical research has demonstrated that job crafting can effectively enhance employees' adaptive performance. However, few studies have systematically examined the relationship between employees' openness to digital transformation and their adaptive performance in this context. Therefore, in light of the ongoing and widespread digital transformation across industries, this study aims to address the following questions: Can employees' openness to digital transformation help improve their adaptive performance? If so, what are the underlying mechanisms and boundary conditions of this effect?

Drawing on Conservation of Resources (COR) theory, the improvement of employees' adaptive performance can be viewed as a process of resource accumulation and utilization, involving the acquisition and investment of skill-based, social, and psychological resources (Hobfoll, 1989; Hobfoll et al., 2018). Specifically, in complex and changing environments, employees tend to engage in proactive behaviors to obtain and build resources to cope with uncertainty. Employees' openness to digital transformation, as a positive psychological attitude, encourages them to proactively engage in job crafting. Through optimizing work tasks, building supportive networks, and redefining the meaning of work, employees accumulate resources that ultimately enhance their adaptive performance.

Resource accumulation is fundamentally based on proactive behavior, which at the individual level is primarily reflected in job crafting. Job crafting enables employees to acquire new skills, establish collaborative networks, and strengthen psychological capital, thereby improving their capacity to respond to change (Güçlü Nergiz & Unsal-Akbiyik, 2024). Moreover, employees' positive cognition of the work environment—shaped by their openness to digital transformation—can stimulate personal initiative, prompting them to craft their jobs to acquire and build resources, thus forming a gain spiral of resource accumulation. Consequently, job crafting is expected to play a mediating role between employees' openness to digital transformation and their adaptive performance.

Building on this foundation, the process through which employees translate their openness into job crafting behaviors varies notably across individuals. Such differences depend on the extent to which employees focus on their own skill development—determining whether they choose to “actively reshape” their work or “maintain the status quo.” As a result, even with the same level of openness, employees may exhibit positive, neutral, or negative levels of job crafting. Learning goal orientation, defined as an individual's tendency to focus on developing competence and seeking learning opportunities (VandeWalle, 1997), effectively captures this individual variability.

According to social cognitive theory (Bandura, 1986), cognitive factors influence how attitudes are translated into behaviors. Matsuo (2019) found that learning goal orientation strengthens employees' motivation to engage in job crafting, while Huang and Luthans (2014) further demonstrated that learning goal orientation amplifies the effect of personal traits on behavior. Therefore, learning goal orientation is likely to moderate the relationship between employees' openness to digital transformation and job crafting. Moreover, this moderating effect may extend to the mediating process, representing a potential boundary condition of the overall model.

In summary, this study, grounded in Conservation of Resources theory and Social Cognitive theory, develops a moderated mediation model to uncover the mechanism and boundary conditions through which employees'

openness to digital transformation influences their adaptive performance. The findings aim to bridge the gap in current literature regarding the micro-level factors affecting employees' adaptive performance within the context of digital transformation. Moreover, the results are expected to provide practical insights for organizations seeking to enhance employees' adaptive performance through effective management interventions during the digital transformation process.

Theoretical Foundation and Research Hypotheses

Employees' Openness to Digital Transformation and Adaptive Performance

Employees' openness to digital transformation is a positive psychological and cognitive attitude, defined by a proactive desire to learn digital skills and a readiness to apply them in the workplace. Adaptive performance is the ability to adjust behaviors and maintain effectiveness in new or changing work environments (Pulakos et al., 2000). In the digital era, employee openness is a key antecedent to adaptive performance.

This study utilizes Conservation of Resources (COR) theory, which posits that individuals seek to acquire and protect valued resources (Hobfoll, 1989). Since adaptive performance relies on skill, social, and psychological resources, we contend that openness to digital transformation promotes the accumulation of these assets and, consequently, enhances performance.

First, openness fosters skill acquisition. Employees with an open mindset are more inclined to learn new digital skills. Supporting this, Nguyen (2025) found that positive perceptions of digitalization improve career adaptability, which in turn boosts adaptive performance. Second, openness facilitates social support. Open employees are more likely to engage with colleagues, seek help, and build collaborative ties. Research shows that social support enhances resilience (Sanhokwe, 2023) and that organizational support improves adaptive performance through role self-efficacy (Emur & Satrya, 2024), confirming the importance of social resources. Third, openness builds psychological resources. An open attitude allows employees to view digital change as an opportunity, a cognitive reframing that strengthens psychological capital.

In sum, based on COR theory, openness to digital transformation enables employees to gain and utilize critical resources, leading to greater adaptability. Therefore, we propose:

H1: Employees' openness to digital transformation is significantly and positively related to employee adaptive performance.

The Mediating Role of Job Crafting

Job crafting refers to employees' proactive adjustments of their job tasks, interpersonal relationships, and cognitive frameworks to better align work with their personal needs and abilities (Tims & Bakker, 2010). From the perspective of the Conservation of Resources (COR) theory, job crafting serves as a key mechanism through which employees actively acquire and build resources. Through job crafting, employees can accumulate skill-based resources, social support resources, and psychological resources. Within the context of digital transformation, job crafting plays an especially critical role as a proactive strategy for employees to cope with environmental change.

Employees' openness to digital transformation may enhance adaptive performance by promoting job crafting behaviors that facilitate resource accumulation. According to the Conservation of Resources (COR) theory (Hobfoll, 1989), employees with higher openness to digital transformation are more capable of effectively acquiring and utilizing resources, thereby exhibiting stronger adaptability when facing change. Specifically, employees with higher openness tend to hold positive attitudes toward new technologies, which may motivate

them to proactively engage in job crafting—such as learning digital tools to optimize workflows, building collaborative networks with technical experts, and viewing digital challenges as opportunities for growth.

Through these job crafting behaviors, employees can accumulate skill-based resources, social support resources, and psychological capital. As a proactive form of resource construction, job crafting effectively facilitates resource accumulation, thereby enhancing adaptive performance. Vakola et al. (2022) found that daily job crafting behaviors, such as adjusting task boundaries and seeking resources, significantly improve adaptive performance on the same day, directly supporting the positive impact of job crafting on adaptability. Similarly, Li et al. (2025) found that proactive behaviors—such as seeking feedback and solving problems—mediate the relationship between task uncertainty and adaptive performance, providing empirical evidence for the mediating role of job crafting as a proactive behavior.

According to the resource gain spiral proposed in the COR theory (Hobfoll et al., 2018), when employees accumulate skill-based, social, and psychological resources through job crafting, these resources further encourage additional job crafting behaviors, forming a positive cycle of “resource accumulation–job crafting–resource gain.” This resource gain spiral enables employees to continuously adjust their behaviors and sustain or enhance adaptive performance amid ongoing digital transformation. In summary, employees’ openness to digital transformation may improve adaptive performance by fostering job crafting behaviors. Based on this reasoning, the following hypothesis is proposed:

H2: Job crafting mediates the relationship between employees’ openness to digital transformation and adaptive performance.

The moderating role of learning goal orientation

Learning goal orientation (LGO) is a key individual trait that reflects one’s intrinsic tendency to develop abilities, master tasks, and learn from experience (VandeWalle, 1997). It shapes employees’ attitudes and behaviors in meaningful ways. Individuals high in LGO view ability as malleable and believe effort leads to improvement. When facing challenges, they are more likely to adopt mastery-oriented strategies, such as seeking feedback or trying new methods, rather than avoiding difficulty (Dweck & Leggett, 1988).

This study argues that LGO moderates the relationship between openness to digital transformation and job crafting. According to social cognitive theory (Bandura, 1986), behavior emerges from the dynamic interaction among personal factors, environment, and behavior. Within this framework, LGO operates as a central personal cognition that influences how positive attitudes (e.g., openness) are translated into concrete actions (e.g., job crafting).

Specifically, employees high in LGO focus on capability development and view challenges as learning opportunities. When such employees are open to digital transformation, their learning motivation is activated. They not only have the intention to turn openness into action, but also feel a strong need to acquire new skills and resources through job crafting. This motivation increases the likelihood that they will proactively craft their jobs. Prior research supports this view: Lin et al. (2021) show that LGO strengthens employees’ motivation to craft their jobs, and Huang and Luthans (2015) find that LGO amplifies the effects of other personal traits on positive behaviors. Thus, for high-LGO employees, openness to digital transformation has a stronger positive effect on job crafting.

In contrast, employees low in LGO place less emphasis on personal growth and are more inclined to avoid challenges. Even if they are somewhat open to digital transformation, such openness may remain at the cognitive level. They lack the internal drive to convert it into job crafting. Because they do not feel a strong need to gain new resources through crafting, the influence of openness on their job crafting is weaker.

In sum, the level of LGO determines the strength of motivation to transform openness toward change into concrete action. Accordingly, we propose:

H3: Learning goal orientation positively moderates the relationship between openness to digital transformation and job crafting. The higher the level of LGO, the stronger the positive effect of openness on job crafting; the lower the level of LGO, the weaker the effect.

The Moderated Mediation Role of Learning Goal Orientation

Building on H2 and H3, this study further proposes a moderated mediation model, in which learning goal orientation moderates the mediating effect of job crafting in the relationship between employees' openness to digital transformation and adaptive performance.

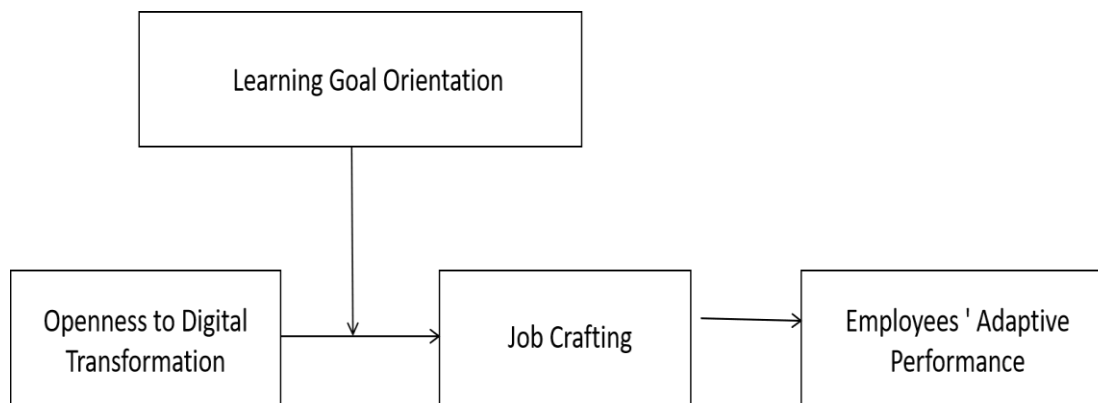
According to social cognitive theory (Bandura, 1986), individual behavior results from the dynamic interaction among personal, environmental, and behavioral factors, and cognitive factors influence how individuals translate attitudes into behaviors. Compared with employees who have a low level of learning goal orientation, those with a high level are more likely to perceive challenges as opportunities for learning. Therefore, when they hold an open attitude toward digital transformation, they are more inclined to engage in job crafting to acquire new skills and resources. Since employees with high learning goal orientation view abilities as malleable and believe that effort and learning can enhance competence (Dweck & Leggett, 1988), learning goal orientation can be regarded as an essential individual resource that facilitates the conversion of attitudes into behaviors. Consequently, under conditions of high learning goal orientation, the positive effect of employees' openness to digital transformation on job crafting is strengthened.

Job crafting enables employees to accumulate skill-based, social support, and psychological resources. The accumulation of these resources not only directly enhances adaptive performance but also generates a positive cycle that promotes long-term performance improvement. Employees with abundant resources are better equipped to adjust their behaviors and respond effectively to environmental changes, thereby achieving higher adaptive performance. Based on this reasoning, the following hypothesis is proposed:

H4: Learning goal orientation moderates the mediating effect of job crafting in the relationship between employees' openness to digital transformation and adaptive performance. The higher the level of learning goal orientation, the stronger the mediating effect; conversely, the effect weakens when learning goal orientation is lower.

Based on the integration of the above hypotheses, this study develops a comprehensive model to explain the indirect effect of employees' openness to digital transformation on adaptive performance, as illustrated in Figure 1.

Figure 1. Research Model



Research Design

Research Sample

This study employed purposive sampling to recruit participants. Given that the research focuses on employees' adaptive performance in the context of digital transformation, participants were selected from enterprises in Guangdong Province that are currently undergoing digital transformation. Data were collected primarily through professional and personal contacts, including friends and colleagues, who helped distribute the survey to employees in representative industries such as manufacturing, construction, and finance. After explaining the purpose of the study and assuring participants of the confidentiality and anonymity of their responses, the survey was administered via the online questionnaire platform "Wenjuanxing". A total of 478 questionnaires were returned. Following data quality and logical consistency checks (e.g., removing responses with excessively short completion times or patterned answers), 47 invalid responses were excluded, resulting in 431 valid and usable questionnaires, yielding an effective response rate of 90.17%.

Among the valid respondents, 52.9% were male and 47.1% were female. In terms of age distribution, 7.9% were aged 18–25, 42.5% aged 26–35, 22.7% aged 36–45, 17.4% aged 46–55, and 9.5% were over 55 years old. Regarding job position, 69.1% were general employees, 16.7% were frontline managers, 10.4% were middle managers, and 3.7% were senior managers. In terms of work tenure, 19.3% had worked for less than one year, 40.6% for 1–3 years, 22.3% for 4–6 years, 10.7% for 7–9 years, and 7.2% for more than 10 years. Regarding educational background, 22.5% held a high school diploma or below, 36.4% held an associate degree, 37.8% held a bachelor's degree, and 3.2% held a master's degree or above.

Variable Measurement

All measurement scales used in this study were adapted from well-established instruments published in domestic and international research. Each variable was assessed using a five-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree").

Employees' Openness to Digital Transformation was measured using a four-item scale adapted from Wanberg and Banas (2000). A representative item is: "I believe I am open to digital changes in my work." The Cronbach's α coefficient for this scale was 0.87. Job crafting was measured using a four-item scale developed by Leana et al. (2009). A representative item is: "I introduce new methods to improve my work." The Cronbach's α coefficient for this scale was 0.77.

Employees' adaptive performance was assessed using an eight-item scale developed by Marques-Quinteiro et al. (2015). A representative item is: "When facing unpredictable situations, I can adjust flexibly, shift priorities, and take appropriate actions." The Cronbach's α coefficient for this scale was 0.87.

Learning goal orientation was measured using a five-item scale developed by Brett and VandeWalle (1999). A representative item is: “I often look for opportunities that allow me to learn new skills and knowledge.” The Cronbach’s α coefficient for this scale was 0.78.

Following prior research, gender, age, education level, tenure, and job position were included as control variables to minimize potential confounding effects on the study’s results.

Data Analysis and Hypothesis Testing

Reliability and Validity Tests

All measurement scales used in this study demonstrated satisfactory reliability, with Cronbach’s α coefficients exceeding the conventional threshold of 0.70. The standardized factor loadings for all items were above 0.60, while the composite reliability (CR) and average variance extracted (AVE) values were higher than the recommended cutoffs of 0.70 and 0.50, respectively (see Table 1). These results indicate that the data possess strong internal consistency and convergent validity.

To assess discriminant validity among the study variables, confirmatory factor analysis (CFA) was conducted. The four-factor model—in which all constructs were treated as distinct—served as the baseline model and was compared with three alternative, nested models. As shown in Table 2, the four-factor model demonstrated superior fit indices ($\chi^2/df = 1.412$, CFI = 0.984, TLI = 0.982, RMSEA = 0.031) compared with the three competing models. These results confirm that the four-factor baseline model provides the best fit, indicating that the main constructs exhibit strong discriminant validity.

Table1. Reliability and Validity Analysis

Variables	Factor Loadings	Cronbach's a	CR	AVE
Openness to Digital Transformation	0.763-0.801	0.861	0.862	0.609
Job Crafting	0.760-0.830	0.875	0.875	0.638
Employees’adaptive performance	0.737-0.770	0.911	0.911	0.562
Learning Goal Orientation	0.734-0.802	0.867	0.867	0.567

Table 2. Confirmatory Factor Analysis

Model	Factors	X2	df	X2/df	CFI	TLI	RMSEA
Four-Factor Model	D,J,P,L	258.35	183	1.412	0.984	0.982	0.031
Three-Factor Model	D,J,P+L	884.589	186	4.756	0.855	0.836	0.093
Two-Factor Model	D+J,P+L	1493.567	188	7.945	0.728	0.696	0.127
One-Factor Model	D+J+P+L	1840.971	189	9.741	0.656	0.618	0.143

Note: D = Openness to Digital Transformation, J = Job Crafting, P = Employees' Adaptive Performance, L = Learning Goal Orientation.

Common Method Bias Test

Since all data in this study were collected through self-reports from the same respondents, there may be concerns regarding common method bias. To address this issue, Harman's single-factor test was conducted. All measurement items were entered into an unrotated exploratory factor analysis, and the results showed that the first factor accounted for 37.995% of the total variance, which is below the critical threshold of 40% . This indicates that common method bias is not a serious concern in this study.

Descriptive Statistics and Correlation Analysis

Table 3 presents the descriptive statistics and correlation matrix of all study variables. As shown in the table, openness to digital transformation is positively correlated with job crafting ($r = 0.368$, $p < 0.01$), adaptive performance ($r = 0.468$, $p < 0.01$), and learning goal orientation ($r = 0.385$, $p < 0.01$). Job crafting is positively correlated with adaptive performance ($r = 0.559$, $p < 0.01$) and learning goal orientation ($r = 0.345$, $p < 0.01$). In addition, learning goal orientation is positively correlated with adaptive performance ($r = 0.464$, $p < 0.01$). These results provide preliminary support for the proposed hypotheses.

Table 3. Descriptive Statistics and Correlations

Variables	1	2	3	4	5	6	7	8	9
1. Openness to Digital Transformation	1								
2. Job Crafting	0.368**	1							
3. Employees' Adaptive Performance	0.468**	0.559**	1						
4. Learning Goal Orientation	0.385**	0.345**	0.464**	1					
5. Gender	0.007	0.050	-0.022	0.058	1				
6. Age	0.197**	0.274**	0.407**	0.232**	-0.016	1			
7. Education Level	-0.018	-0.074	-0.050	-0.003	-0.058	-0.021	1		
8. Tenure	0.073	0.108*	0.175**	0.080	-0.038	0.164**	0.039	1	
9. Job Position	-0.029	-0.040	-0.126**	-0.058	-0.028	-0.073	0.035	-0.029	1

Note: * and ** indicate significance at the 0.05 and 0.01 levels, respectively, and the same applies hereafter.

Hypothesis Testing

Tests of Main and Mediating Effects

Using hierarchical regression analysis, adaptive performance was set as the dependent variable, with control variables, the independent variable, and the mediating variable entered sequentially to test the main and mediating effects of employees' openness to digital transformation (see Table 4). The results of Model M2 show that employees' openness to digital transformation has a significant positive effect on adaptive performance ($\beta = 0.323$, $p < 0.01$), providing support for Hypothesis H1. After adding the mediating variable (job crafting) in Model M4, the results indicate that job crafting has a significant positive effect on adaptive performance ($\beta = 0.342$, $p < 0.01$), and employees' openness to digital transformation still has a significant positive effect ($\beta = 0.236$, $p < 0.01$). These findings suggest that job crafting partially mediates the relationship between employees' openness to digital transformation and adaptive performance, thus supporting Hypothesis H2.

To further verify the mediating role of job crafting, PROCESS Model 4 was applied with 5,000 bootstrap samples. The results (see Table 5) show that the total effect of employees' openness to digital transformation on adaptive performance is 0.344 (SE = 0.035, 95% CI = [0.275, 0.412]); the direct effect is 0.236 (SE = 0.033, 95% CI = [0.170, 0.301]); and the indirect effect through job crafting is 0.108 (SE = 0.020, 95% CI = [0.071, 0.150]). Since the confidence interval does not include zero, the mediating effect of job crafting is significant, providing further support for Hypothesis H2.

Table 4. Tests of main effects, mediation, and moderation

Predictor Variables	Employees' Adaptive Performance				Job Crafting
	M1	M2	M3	M4	M5
Control Variables					
Gender	0.052	0.049	-0.042	-0.093	0.065
Age	0.260**	0.199**	0.256**	0.236**	0.204**
Education Level	-0.068	-0.063	-0.011	-0.019	-0.106
Tenure	0.07	0.056	0.078*	0.074*	0.057
Job Position	-0.015	-0.011	-0.087*	-0.118*	0.000
Independent Variable					
Openness to Digital Transformation		0.323**		0.236**	
Mediating Variable					
Job Crafting			0.479**	0.342**	
Moderating Variable					
Learning Goal Orientation					0.224**

Predictor Variables	Employees' Adaptive Performance				Job Crafting
	M1	M2	M3	M4	M5
Interaction Term					
Openness to Digital Transformation × Learning Goal Orientation					0.093**
R ²	0.087	0.187	0.398	0.461	0.233

Table 5. Bootstrap test of mediation effects

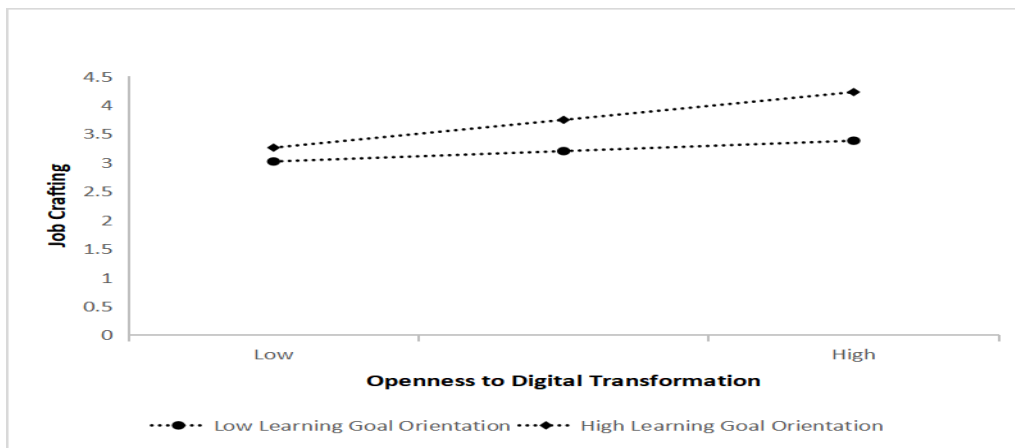
Effect Type	Effect Value	SE	95% CI Lower Limit	95% CI Upper Limit
Total Effect	0.344	0.035	0.275	0.412
Direct Effect	0.236	0.033	0.170	0.301
Indirect Effect	0.108	0.020	0.071	0.150

Moderation Effect Analysis

To examine the moderating effect of learning goal orientation on the relationship between openness to digital transformation and job crafting, PROCESS Model 7 was applied, with both the independent and moderating variables mean-centered before analysis. The results of Model M5 (see Table 4) show that the interaction term between openness to digital transformation and learning goal orientation has a significant positive effect on job crafting ($\beta = 0.093$, $p < 0.01$), indicating that learning goal orientation moderates this relationship.

Further simple slope analysis (see Figure 2) reveals that when learning goal orientation is high, the positive effect of openness to digital transformation on job crafting is stronger ($\beta = 0.362$, $p < 0.01$); when learning goal orientation is low, the positive effect is weaker ($\beta = 0.135$, $p < 0.05$). These findings provide empirical support for Hypothesis H3.

Figure 2. Moderating effect of learning goal orientation



Test of Moderated Mediation Effect

To examine the moderated mediation effect, PROCESS Model 7 in SPSS was employed. Based on 5,000 bootstrap resamples, the results (see Table 6) indicate that when learning goal orientation is low, the 95% confidence interval for the indirect effect does not include zero (LLCI = 0.002, ULCI = 0.093), suggesting that the mediating effect of job crafting is significant (indirect effect = 0.046, $p < 0.05$). When learning goal orientation is high, the 95% confidence interval also excludes zero (LLCI = 0.079, ULCI = 0.174), and the mediating effect of job crafting is even stronger (indirect effect = 0.124, $p < 0.05$).

In addition, the index of moderated mediation is 0.032, with a 95% confidence interval of [0.008, 0.057], which does not include zero. This further confirms the presence of a significant moderated mediation effect. These findings indicate that the mediating role of job crafting becomes stronger as learning goal orientation increases, thereby providing support for Hypothesis H4.

Table 6. Analysis of moderated mediation effects

Learning Goal Orientation	Effect Value	SE	LLCI	ULCI
Low(-1SD)	0.046	0.023	0.002	0.093
Medium(Mean)	0.085	0.018	0.050	0.123
High(+1SD)	0.124	0.024	0.079	0.174
Index of Moderated Mediation	0.032	0.013	0.008	0.057

Note: Based on 5,000 bootstrap samples. LLCI and ULCI represent the 95% confidence interval, where LLCI = Lower Level Confidence Interval and ULCI = Upper Level Confidence Interval.

CONCLUSION AND DISCUSSION

Research Findings

Drawing on the Conservation of Resources (COR) theory and Social Cognitive Theory, this study examines the effect of employees' openness to digital transformation on adaptive performance, as well as the moderating role of learning goal orientation. The main findings are as follows:

Employees' openness to digital transformation has a significant positive effect on adaptive performance. Employees with higher openness to digital transformation are more capable of acquiring and utilizing resources effectively, enabling them to display stronger adaptability when facing change. Job crafting mediates the relationship between employees' openness to digital transformation and adaptive performance. Employees who are open to digital transformation are more likely to engage in job crafting, which helps them accumulate skill-based, social support, and psychological resources, thereby enhancing adaptive performance. Learning goal orientation plays a positive moderating role. Specifically, learning goal orientation strengthens the positive effect of openness to digital transformation on job crafting, forming a moderated mediation effect. When employees have a higher level of learning goal orientation, their openness to digital transformation is more effectively translated into job crafting behaviors, which in turn more strongly enhances adaptive performance through the mediating mechanism of job crafting.

Theoretical Contributions

First, this study extends research on the antecedents of employees' adaptive performance. While prior studies have emphasized individual resources such as psychological capital (Dewi & Soeling, 2024; Sanhokwe, 2023), the present findings demonstrate that openness to digital transformation—a key attitudinal variable—is an important predictor of adaptive performance. Building on Hamid's (2022) work on technological readiness, this study underscores the value of this integrative construct and fills a gap in the related literature.

Second, this study reveals the underlying mechanism through which openness to digital transformation influences adaptive performance. Traditional attitude–performance research has paid little attention to the behavioral transformation pathway. Drawing on conservation of resources theory and social cognitive theory, this study identifies the mediating role of job crafting and establishes a complete transmission chain: openness attitude → job crafting (proactive behavior) → adaptive performance. This extends the work of Vakola et al. (2022) and Li et al. (2025), clarifying how positive attitudes in the context of digital transformation can be translated into adaptive performance through proactive job crafting.

Third, this study specifies the boundary conditions under which openness to digital transformation exerts its influence. Previous research has often overlooked individual differences in the process of attitude-to-behavior transformation. Addressing the call in the literature (Lin et al., 2021), this study shows that learning goal orientation moderates the relationship between openness to digital transformation and job crafting: low learning goal orientation weakens the translation of high openness into job crafting behaviors. This finding provides new insights into the role of individual differences in shaping proactive behaviors.

Managerial Implications

Organizations should prioritize fostering employees' openness to digital transformation. This can be achieved by regularly organizing training sessions, workshops, and experience-sharing events focused on digital technologies, which will enhance employees' understanding of the value of digital tools and increase their willingness to adopt digital work practices. By taking a multi-dimensional approach, companies can strengthen employees' openness to digital transformation across various aspects. Moreover, organizations should establish a comprehensive digital learning system that provides employees with ongoing opportunities and platforms to develop digital skills. Alongside this, organizations should implement supportive incentive schemes to encourage employees to proactively embrace digital transformation, thereby cultivating an organizational culture that supports and drives digital transformation.

Additionally, during the digital transformation process, managers should focus more on how to stimulate employees' job crafting behaviors rather than relying solely on organizational-level policies. Management should address subtle aspects, creating a supportive work environment that encourages employees to proactively adjust their tasks, build collaborative networks, and redefine the meaning of their work. This approach promotes job crafting behaviors (Subramaniam et al., 2025). Managers should provide the necessary resources and psychological safety to support employees' job crafting, ultimately helping them better adapt to the digital environment.

Finally, managers must prioritize the development of employees' learning goal orientation and use various methods to enhance their learning motivation. On one hand, managers should segment employees based on their learning goal orientation, offering more challenging digital projects to employees with strong learning goal orientation, while providing targeted guidance and incentives to employees with weaker learning goal orientation, helping them develop a growth mindset toward skill development. On the other hand, organizations can enhance employees' learning goal orientation through a variety of methods, such as establishing a learning-oriented organizational culture, setting learning benchmarks, and providing learning feedback (Jiao et al., 2025). This approach cultivates employees' mindset to view challenges as learning opportunities rather than threats.

Limitations and Directions for Future Research

First, the cross-sectional and single-source design of this study may lead to common method bias and limits the ability to infer dynamic causal relationships. Future research could employ longitudinal designs, daily diary

methods, or multi-source data (such as supervisor ratings) to enhance reliability and validity.

Second, with regard to the underlying mechanism, this study only tested the mediating role of job crafting. Future studies could draw on theories such as social information processing or social learning to explore other potential mediators. In addition, the research framework could be extended to a broader set of outcomes, such as innovative behavior and job performance.

Third, in terms of boundary conditions, this study examined only the moderating role of learning goal orientation. Future research should adopt a broader perspective. For example, based on conservation of resources theory, scholars could investigate the moderating effects of individual resources such as psychological capital and resilience, or examine contextual factors such as perceived organizational support and team climate. Such efforts would help build a more comprehensive theoretical model.

Data available: Data can be obtained by contacting the corresponding author.

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Consent for publication: not applicable

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