

Beyond Direct AI Assistance: The Mediating Role of AI Crafting in Converting Employee-AI Collaboration into Incremental and Radical Creativity

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Abstract: Artificial intelligence is becoming a routine partner in enterprise work, but its creative value depends on how employees reconfigure their work around AI. Using 138 valid survey responses from Chinese employees with AI-use experience, this study examines whether employee-AI collaboration promotes incremental and radical creativity through AI crafting. Results show that employee-AI collaboration significantly predicts AI crafting and both creativity outcomes. AI crafting further mediates these relationships. The findings highlight AI crafting as a behavioral mechanism linking human-AI collaboration with dual creativity.

Keywords: Employee-AI collaboration; AI crafting; Incremental creativity; Radical creativity; Enterprise management

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1. Introduction

Artificial intelligence (AI) is increasingly embedded in enterprise work systems, changing how employees search for information, make judgments, and solve problems. Unlike traditional digital tools, AI can participate in decision processes and provide suggestions that reshape employees' task boundaries. Recent studies indicate that employee-AI collaboration is not merely a technical use behavior, but a proactive form of human-AI interaction that can influence work adaptation and career-related outcomes^[1,2].

At the same time, the creativity value of AI is not automatic. Employees need to translate AI-enabled resources into new work methods. AI crafting captures such proactive adjustment: employees explore, learn, and redesign work processes when collaborating with AI. Prior research has shown that AI-related conditions can encourage crafting behavior and innovation-oriented outcomes^[3-5]. However, fewer studies have directly examined whether AI crafting explains how employee-AI collaboration contributes to different types of em-

ployee creativity.

Employee creativity includes both incremental creativity, which improves existing ideas and procedures, and radical creativity, which produces more original and breakthrough approaches^[6]. Based on this logic, this study examines employee-AI collaboration as an antecedent of AI crafting and further tests whether AI crafting promotes both incremental and radical creativity. The study responds to recent calls to explain the behavioral mechanism linking AI use with dual creativity in Chinese organizational contexts^[7].

2. Literature review and hypotheses

2.1. Employee-AI collaboration and AI crafting

Employee-AI collaboration refers to the extent to which AI participates in employees' decision-making, prediction, problem-solving, information evaluation, and risk identification processes. Kong et al. argued that employee-AI collaboration represents a proactive behavior through which employees fit into AI-integrated environments^[1]. In enterprise work, such collaboration provides employees with additional information, cognitive support, and task feedback, which may create conditions for employees to redesign how they work with AI.

AI crafting emphasizes employees' active efforts to explore AI tools, adjust inefficient routines, learn AI-related skills, and optimize human-AI interaction. When employees collaborate more frequently with AI, they are more likely to recognize where AI can improve task processes and where human judgment still matters. Liang et al. also show that employee-AI collaboration can shape crafting-related behavior through employees' interpretation of AI uncertainty^[2]. Therefore, closer employee-AI collaboration is expected to encourage AI crafting.

H1: Employee-AI collaboration is positively related to AI crafting.

2.2. AI crafting and dual creativity

AI crafting may promote employee creativity because it transforms AI resources into concrete work improvements. Through AI crafting, employees can search for alternative solutions, compare outputs, modify existing procedures, and improve the fit between AI suggestions and organizational tasks. Li et al. and Liu et al. suggest that AI-related crafting is associated with positive employee outcomes, while Xu et al. further link AI crafting with innovation behavior^[3-5]. These studies provide a behavioral explanation for why AI use may contribute to creative work.

Incremental and radical creativity may both benefit from AI crafting, but in different ways. AI crafting can support incremental creativity by helping employees improve existing ideas, adapt current processes, and make small-scale refinements. It can also support radical creativity by expanding employees' information range, stimulating unusual combinations and lowering the cost of experimenting with new ideas. Zhang et al. (2025) found that generative AI use can affect both incremental and radical creativity through learning mechanisms.

H2a: AI crafting is positively related to incremental creativity.

H2b: AI crafting is positively related to radical creativity.

2.3. The mediating role of AI crafting

Employee-AI collaboration may influence creativity not only directly but also through AI crafting. Collaboration with AI provides technological resources, but creativity requires employees to reorganize those resources into work processes actively. AI crafting functions as the behavioral bridge between "working with

AI” and “creating with AI”. When employees integrate AI into their task routines, they are more likely to identify possibilities for improving existing practices and proposing novel work methods.

This mediating logic is consistent with recent AI management research. Liang et al. emphasize the double-edged nature of employee-AI collaboration, suggesting that employee responses determine whether AI collaboration produces positive outcomes^[8]. Xu et al. highlight AI crafting as a mechanism linking responsible AI conditions with service innovation^[5]. Therefore, this study proposes that AI crafting mediates the relationship between employee-AI collaboration and both creativity outcomes.

H3a: AI crafting mediates the relationship between employee-AI collaboration and incremental creativity.

H3b: AI crafting mediates the relationship between employee-AI collaboration and radical creativity.

3. Research methodology

3.1. Variable measurement

The questionnaire used mature scales and adapted them to the employee AI-use context. Employee-AI collaboration was measured using five items developed by Kong et al.^[11]. AI crafting was measured using six items adapted from Li et al.^[3]. Incremental creativity and radical creativity were measured using three items for each dimension based on Madjar et al.^[6]. All items were rated on a seven-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree.

3.2. Data collection and sample

Data were collected through an online questionnaire platform. A screening question was used to ensure that respondents had used AI tools in work or organizational contexts. Two newly collected datasets were merged, and after removing repeated header records, 138 valid responses were retained. The gender distribution was balanced, with 70 male and 68 female respondents. Most respondents were aged between 21 and 40. Private-enterprise employees formed the largest group, followed by state-owned enterprise employees, public institution employees, and other occupational groups. Most respondents held undergraduate or graduate degrees.

4. Data analysis

4.1. Reliability and validity analysis

Before structural testing, reliability, convergent validity, collinearity, and common method bias were examined following Kock et al.^[9]. Cronbach’s alpha values ranged from 0.621 to 0.800, and composite reliability values ranged from 0.767 to 0.883, supporting acceptable measurement reliability for exploratory enterprise management research. The first unrotated factor explained 36.66% of total variance, and all VIF values were below 1.45, suggesting that common method bias and collinearity did not dominate the results.

4.2. Descriptive statistics and correlation analysis

Table 1 reports the means, standard deviations, and Pearson correlation coefficients. Employee-AI collaboration was positively correlated with AI crafting, incremental creativity, and radical creativity. AI crafting was also strongly correlated with both creativity outcomes. These preliminary results provide initial support for the proposed relationships. See **Table 1**.

Table 1. Means, standard deviations, and correlations

Variable	Mean	SD	1	2	3	4
1. Employee-AI collaboration	5.764	0.571	1			
2. AI crafting	5.942	0.598	0.514***	1		
3. Incremental creativity	5.710	0.734	0.496***	0.772***	1	
4. Radical creativity	5.449	0.932	0.505***	0.676***	0.763***	1

Note. *** $p < 0.001$.

4.3. Structural model and mediation analysis

Hierarchical regression and a 5,000-sample bootstrap procedure were used to test the hypotheses, with gender, age, and education controlled. As shown in **Table 2**, employee-AI collaboration had a significant positive effect on AI crafting, supporting H1. Employee-AI collaboration also showed significant total effects on incremental and radical creativity. When AI crafting was added to the models, AI crafting significantly predicted both incremental creativity and radical creativity, supporting H2a and H2b.

Table 2. Structural path and mediation test results

Path	Effect	p value / 95% CI	R ²	Decision
Employee-AI collaboration → AI crafting	0.530	< 0.001	0.308	H1 supported
Employee-AI collaboration → Incremental creativity	0.511	< 0.001	0.284	total effect
Employee-AI collaboration → Radical creativity	0.520	< 0.001	0.296	total effect
AI crafting → Incremental creativity	0.691	< 0.001	0.615	H2a supported
Employee-AI collaboration → Incremental creativity	0.144	0.026	0.615	partial direct effect
AI crafting → Radical creativity	0.547	< 0.001	0.503	H2b supported
Employee-AI collaboration → Radical creativity	0.230	0.002	0.503	partial direct effect
Employee-AI collaboration → AI crafting → Incremental creativity	0.366	[0.235, 0.500]	-	H3a supported
Employee-AI collaboration → AI crafting → Radical creativity	0.290	[0.172, 0.412]	-	H3b supported

Note: Standardized coefficients are reported. Indirect effects are based on 5,000 bootstrap samples. Gender, age, and education were controlled.

Therefore, H3a and H3b were supported. AI crafting serves as a shared behavioral mechanism through which employee-AI collaboration contributes to both types of creativity.

5. Conclusion, discussion, and managerial implications

5.1. Conclusion and discussion

This study examined how employee-AI collaboration influences AI crafting and dual creativity in AI-transformed enterprises. The results show that employee-AI collaboration is positively associated with AI crafting and with both incremental and radical creativity. More importantly, AI crafting mediates the effects of employee-AI collaboration on the two creativity outcomes. This means that AI does not enhance creativity simply because it is available. Employees must actively explore AI functions, adjust routines, and learn how to interact with AI tools before collaboration can be converted into creative performance. The findings extend employee-AI collaboration research by identifying AI crafting as a behavioral mechanism and enrich creativity research by showing that AI-enabled work redesign supports both refinement-oriented and

breakthrough-oriented creativity.

5.2. Managerial implications and limitations

Enterprises should not only provide AI tools but also encourage employees to redesign tasks, share AI-use experience, and experiment with human-AI interaction. Managers can create AI practice communities, provide prompt-design training, and reward employees who use AI to improve existing processes or develop novel solutions.

Several limitations should be noted. The study used self-report data, which may not fully capture supervisor-rated creativity or actual AI-use behavior. Future research could adopt longitudinal or multi-source designs, compare industries, and examine whether AI crafting has different effects across task complexity, AI tool types, and stages of digital transformation.

Disclosure statement

The authors declare no conflict of interest.

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