# The Dual-Edged Sword Effect of Didactic Leadership on Employee Creativity in Chinese Military Technology Enterprises

### Yinglei Zhang[1]

[1] Centre of Postgraduate Studies, Asia Metropolitan University (AMU), Johor Bahru, Malaysia.
   Email: 914936357@qq.com

## Abstract

This study investigates the impact of didactic leadership on employee creativity in Chinese military technology enterprises. Drawing on social information processing theory, the study examines the mediating roles of exploitative learning and exploratory learning, and the moderating effect of proactive personality. A sample of 426 employees and their leaders was surveyed using a three-stage, employee-leader 1:1 pairing method. The results show that didactic leadership has a positive effect on exploitative learning but a negative effect on exploratory learning. Both exploitative and exploratory learning significantly impact employee creativity, serving as mediating variables. Furthermore, proactive personality positively moderates the relationship between didactic leadership and exploitative learning, while negatively moderating the relationship between didactic leadership and exploratory learning. The findings provide a comprehensive understanding of the dual-edged sword effect of didactic leadership on employee creativity and offer practical implications for Chinese enterprises to enhance creativity through leadership and personal development strategies.

**Keywords**: *Didactic leadership, Employee creativity, Exploitative learning, Exploratory learning, Proactive personality, Chinese military technology enterprises.*

## 1. Introduction

In the ever-evolving landscape of the global defense industry, China's military technology enterprises have emerged as formidable forces, distinguished by their remarkable technological advancements and robust innovative capabilities. These enterprises are pivotal not only to China's national security but also to the global defense market, as they continuously push the boundaries of military technology (Liu & Li, 2019). Within this dynamic environment, leadership stands as a cornerstone in shaping organizational culture, fostering employee performance, and driving creativity. Creativity, in particular, is recognized as a critical factor that fuels innovation and sustains the competitive advantage of organizations in the defense sector (Amabile et al., 2004). However, the leadership styles prevalent in Chinese organizations, often deeply rooted in traditional authoritarianism, present a complex challenge. While these

styles may have served historical purposes, they can inadvertently stifle creativity by enforcing rigid hierarchical structures, limiting autonomy, and discouraging risk-taking (Farh & Cheng, 2000). In contrast to purely authoritarian approaches, didactic leadership, a variant grounded in Confucian philosophy, offers a more nuanced perspective. Didactic leadership emphasizes guidance, mentoring, and the cultivation of employee skills and abilities, fostering a learning environment that encourages personal and professional growth (Cheng et al., 2014). Despite its potential benefits, the impact of didactic leadership on employee creativity in the context of Chinese military technology enterprises remains largely unexamined. This oversight is significant, given the unique characteristics of these enterprises, including their emphasis on innovation, the high-stakes nature of their work, and the distinct cultural and organizational dynamics at play (Li & Wang, 2020). To bridge this gap, this study seeks to investigate the mechanisms through which didactic leadership influences employee creativity in China's military technology enterprises. The research endeavor is guided by three fundamental questions. First, does didactic leadership positively impact employee creativity in this specific context? Second, what are the mediating roles of exploitative learning (i.e., refining and improving existing knowledge and skills) and exploratory learning (i.e., seeking new knowledge and opportunities) in the relationship between didactic leadership and employee creativity? Third, does proactive personality, characterized by a tendency to take initiative and persevere in the face of challenges, moderate these relationships? To address these questions, this study adopts a mediation model that incorporates moderator variables, grounded in social information processing theory (Salancik & Pfeffer, 1978). This theoretical framework posits that individuals process social cues from their environment to form attitudes, beliefs, and behaviors. In the context of leadership and creativity, employees are likely to interpret cues from their leaders and adjust their creative behaviors accordingly. By exploring the dual pathways through which didactic leadership influences employee creativity, this research aims to contribute to a deeper understanding of leadership effectiveness in stimulating creativity within Chinese organizational contexts, particularly in the high-stakes domain of military technology.

## 2. Literature Review
### 2.1 Didactic Leadership
Didactic leadership, a concept deeply embedded in Confucian philosophy, represents a unique leadership style that emphasizes both strict discipline and nurturing guidance. This leadership approach is distinct from traditional authoritarian leadership, which tends to focus on control and obedience without the element of teaching and personal development (Chen et al., 2017). Didactic leaders not only enforce rules and regulations but also actively engage in mentoring and fostering the personal growth of their subordinates. Previous studies have demonstrated that didactic leadership can have a positive impact on employee performance. For instance, Chen et al. (2017) found that didactic leadership enhances role clarity, cognitive trust, and emotional trust among employees. These factors, in turn, contribute to improved job performance and organizational commitment. However, despite the growing interest in didactic leadership, its influence on employee creativity remains largely unexplored. Employee creativity, as a critical driver of organizational innovation and competitiveness, is influenced by various factors, including leadership styles (Amabile, 1983; Shin & Zhou, 2003). Given the emphasis on teaching and personal development in didactic leadership, it is plausible that this leadership style could foster an environment conducive to creativity. However, more empirical research is needed to elucidate the specific mechanisms through which didactic leadership influences employee creativity.

### 2.2 Employee Creativity
Employee creativity is defined as the generation of novel and useful ideas within an organizational context (Amabile, 1983). This construct is multifaceted, encompassing cognitive abilities, personality traits, and situational factors that interact to influence the creative process (Woodman et al., 1993). Prior research has identified several antecedents of employee

creativity, including leadership styles, team dynamics, organizational culture, and job characteristics (Shin & Zhou, 2003; Tierney et al., 1999). Leadership, in particular, has been shown to play a crucial role in shaping employee creativity. Different leadership styles can either promote or inhibit creative thinking and idea generation among employees (Amabile et al., 2004). For example, transformational leadership, which encourages innovation and risk-taking, has been found to positively correlate with employee creativity (Bass & Avolio, 1990). In contrast, authoritarian leadership, which emphasizes control and obedience, may stifle creativity by limiting employees' autonomy and freedom to express new ideas (Janssen et al., 2004). Given the unique characteristics of didactic leadership, it is important to investigate its specific impact on employee creativity. By combining elements of strict discipline with nurturing guidance, didactic leadership may create a supportive environment that encourages employees to explore new ideas and think creatively.

## 2.3 Exploitative Learning and Exploratory Learning

Learning within organizations can be broadly categorized into exploitative and exploratory learning (March, 1991). Exploitative learning involves the refinement and extension of existing knowledge and skills within an organization's current domain. This type of learning is characterized by incremental improvements and efficiency gains, as organizations leverage their existing capabilities to enhance performance (Levinthal & March, 1993). In contrast, exploratory learning entails the acquisition of new knowledge and skills outside the organization's current domain. This type of learning is often associated with radical innovations and breakthroughs, as organizations venture into new areas and experiment with novel ideas (March, 1991). Both exploitative and exploratory learning are essential for organizational adaptation and competitiveness, as they enable organizations to improve their current offerings and explore new opportunities (Tushman & O'Reilly, 1996). Prior research has shown that leadership styles can influence the balance between exploitative and exploratory learning within organizations (Jansen et al., 2009). For example, leaders who emphasize efficiency and stability may promote exploitative learning, while those who encourage innovation and risk-taking may foster exploratory learning (Levinthal & March, 1993). The current study seeks to investigate how didactic leadership, with its unique combination of discipline and guidance, influences the balance between these two types of learning. Furthermore, both exploitative and exploratory learning have been linked to employee creativity. Exploitative learning, by refining and extending existing knowledge, can help employees identify new applications and improvements, thereby stimulating creative thinking (Dewett & Jones, 2001). Exploratory learning, on the other hand, exposes employees to new ideas and perspectives, which can spark innovative thinking and idea generation (March, 1991). Thus, it is important to consider the role of both types of learning in the relationship between didactic leadership and employee creativity.

## 2.4 Proactive Personality

Proactive personality refers to an individual's tendency to take initiative and shape their environments rather than merely respond to them (Bateman & Crant, 1993). Individuals with proactive personalities are characterized by their ability to identify opportunities, take risks, and persist in the face of challenges (Crant, 1995). This personality trait has been shown to influence various work-related outcomes, including job performance, career success, and leadership emergence (Parker et al., 2010; Seibert et al., 1999). Prior research suggests that proactive personality can moderate the relationships between leadership styles and employee outcomes (Parker et al., 2010). For example, employees with proactive personalities may be more likely to seek out opportunities for growth and development under certain leadership styles, such as transformational leadership (Grant & Ashford, 2008). Conversely, they may be less responsive to leadership styles that emphasize control and obedience (Janssen et al., 2004). In the context of the current study, proactive personality may play a crucial role in moderating the relationships between didactic leadership, exploitative and exploratory learning, and

employee creativity. Individuals with proactive personalities may be more likely to engage in exploitative learning under didactic leadership, as they actively seek out opportunities to refine and extend their existing knowledge. At the same time, they may also be more open to exploratory learning, as their proactive nature drives them to explore new ideas and perspectives.

**2.5 Research Hypotheses**
Based on the literature review, the following hypotheses are proposed to guide the current study:
(1) H1: Didactic leadership is positively correlated with exploitative learning. This hypothesis posits that didactic leaders, by emphasizing discipline and guidance, promote an environment conducive to the refinement and extension of existing knowledge and skills.
(2) H2: Exploitative learning is positively correlated with employee creativity. This hypothesis suggests that as employees engage in exploitative learning, they identify new applications and improvements, which in turn stimulate creative thinking.
(3) H3: Exploitative learning mediates the relationship between didactic leadership and employee creativity. This hypothesis proposes that didactic leadership influences employee creativity through its impact on exploitative learning.
(4) H4: Didactic leadership is negatively correlated with exploratory learning. This hypothesis suggests that didactic leaders, who emphasize discipline and control, may inhibit the acquisition of new knowledge and skills outside the organization's current domain.
(5) H5: Exploratory learning is positively correlated with employee creativity. This hypothesis posits that as employees engage in exploratory learning, they are exposed to new ideas and perspectives, which spark innovative thinking and idea generation.
(6) H6: Exploratory learning mediates the relationship between didactic leadership and employee creativity. This hypothesis proposes that didactic leadership influences employee creativity through its impact on exploratory learning, despite the potential negative correlation between didactic leadership and exploratory learning.
(7) H7: Proactive personality positively moderates the relationship between didactic leadership and exploitative learning. This hypothesis suggests that employees with proactive personalities are more likely to engage in exploitative learning under didactic leadership, as they actively seek out opportunities for growth and development.
(8) H8: Proactive personality negatively moderates the relationship between didactic leadership and exploratory learning. This hypothesis posits that while didactic leadership may inhibit exploratory learning in general, employees with proactive personalities are less affected by this inhibition and may still engage in exploratory learning.
(9) H9: Proactive personality moderates the mediating effect of exploitative learning between didactic leadership and employee creativity. This hypothesis proposes that the positive relationship between didactic leadership and employee creativity through exploitative learning is stronger for employees with proactive personalities.
(10) H10: Proactive personality moderates the mediating effect of exploratory learning between didactic leadership and employee creativity. This hypothesis suggests that the potential negative relationship between didactic leadership and employee creativity through exploratory learning is weakened for employees with proactive personalities, as they are more likely to engage in exploratory learning and generate creative ideas despite the leadership style.

In summary, the literature review has provided a comprehensive understanding of the key constructs relevant to the current study, including didactic leadership, employee creativity, exploitative and exploratory learning, and proactive personality. Based on this review, a set of hypotheses has been proposed to guide the empirical investigation of the relationships among these constructs. The following sections will outline the methodology, results, and discussion of the study, with a focus on testing these hypotheses and contributing to the existing literature.

## 3. Methodology
### 3.1 Research Design
The research design chosen for this study was a cross-sectional survey design. This design was deemed appropriate for testing the hypotheses as it allowed for the collection of data from a large sample of employees and their immediate supervisors in Chinese military technology enterprises. The cross-sectional nature of the design enabled the researchers to capture data at a single point in time, providing a snapshot of the relationships between the variables of interest. This approach is commonly used in management research, as it allows for the efficient collection of data from a large and diverse sample (Sun & Zuo, 2024a; Sun & Zuo, 2024b).

### 3.2 Sample and Procedure
The sample for this study comprised 426 employee-leader dyads, recruited from 18 large military technology enterprises in China. The choice of military technology enterprises was deliberate, as these organizations often operate in highly dynamic and uncertain environments, making them ideal for studying leadership and learning behaviors that foster creativity. To ensure the representativeness of the sample, enterprises of varying sizes and from different regions of China were included. Data collection was conducted in three waves over a period of three months to minimize common method bias. Common method bias is a concern in survey research where the data are collected from the same source or at the same time, potentially leading to inflated relationships between variables (Podsakoff et al., 2003). By collecting data in three waves, the researchers aimed to reduce the likelihood of this bias. In Wave 1, employees were asked to report on their perceptions of didactic leadership and their proactive personality. Didactic leadership, as conceptualized in this study, refers to a leadership style that emphasizes the transmission of knowledge and skills from leaders to subordinates (Chen et al., 2017). Proactive personality, on the other hand, is a dispositional trait characterized by a tendency to take initiative and persist in the face of challenges (Seibert et al., 1999). In Wave 2, employees self-reported on their exploitative learning and exploratory learning. Exploitative learning involves the refinement and improvement of existing knowledge and skills, while exploratory learning involves the acquisition of new knowledge and skills (Mom et al., 2009). By separating the measurement of these two types of learning, the researchers aimed to gain a more nuanced understanding of how they are influenced by leadership and personality factors. In Wave 3, supervisors rated employees' creativity. Creativity was defined as the generation of novel and useful ideas or solutions (Baer & Oldham, 2006). Supervisor ratings were used as they are considered to be more objective and reliable than self-ratings, particularly in the context of work-related outcomes (Podsakoff et al., 2003). The use of a multi-wave data collection process not only helped to minimize common method bias but also allowed for a more comprehensive assessment of the relationships between the variables. By collecting data from both employees and their supervisors, the researchers were able to capture different perspectives and ensure a more robust analysis.

### 3.3 Measures
All measures used in this study were adapted from previously validated scales and translated into Chinese following established back-translation procedures. This approach ensured that the measures were culturally appropriate and retained their original meaning. Didactic Leadership was measured using a nine-item scale developed by Chen et al. (2017). The scale includes items such as "My leader provides me with specific guidance on how to improve my work" and "My leader shares their expertise and knowledge with me." Participants were asked to rate each item on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Proactive Personality was assessed with a ten-item scale by Seibert et al. (1999). The scale includes items such as "I am always looking for better ways to do things" and "I take the initiative to solve problems." Participants were asked to rate each item on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Exploitative Learning and Exploratory Learning were evaluated using an eight-item scale adapted from Mom et al. (2009).

The scale includes four items for exploitative learning, such as "I often refine and improve my existing skills and knowledge," and four items for exploratory learning, such as "I actively seek out new knowledge and skills." Participants were asked to rate each item on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Employee Creativity was rated by supervisors using a four-item scale based on Baer and Oldham (2006). The scale includes items such as "This employee generates novel ideas" and "This employee comes up with creative solutions to problems." Supervisors were asked to rate each item on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The use of previously validated scales ensured the reliability and validity of the measures. The back-translation process further ensured that the measures were appropriate for the Chinese context, allowing for a more accurate assessment of the variables.

### 3.4 Data Analysis

Structural equation modeling (SEM) was employed using Mplus 8.0 to test the hypothesized model. SEM is a statistical technique that allows for the simultaneous estimation of multiple regression equations, making it ideal for testing complex models with multiple dependent and independent variables (Kline, 2016). Prior to conducting the SEM analysis, the researchers conducted a series of preliminary analyses to ensure the appropriateness of the data for the chosen analytical technique. These analyses included checking for missing data, outliers, and the assumptions of linearity, normality, and homoscedasticity. The data were found to meet these assumptions, allowing for the proceeding with the SEM analysis. Common method bias was controlled using Harman's single-factor test and the marker variable technique. Harman's single-factor test involves conducting a factor analysis of all the items in the study and examining the number of factors that emerge. If a single factor explains a substantial portion of the variance in the items, it suggests the presence of common method bias (Podsakoff et al., 2003). In this study, Harman's single-factor test revealed that no single factor emerged, indicating that common method bias was not a concern. The marker variable technique involves including a variable in the analysis that is theoretically unrelated to the study variables but is expected to be influenced by the same method bias. If the marker variable is significantly correlated with the study variables, it provides evidence of common method bias (Podsakoff et al., 2003). In this study, a marker variable was included in the SEM analysis, and it was found to be nonsignificant, further confirming that common method bias was not an issue. The SEM analysis was conducted in two stages. In the first stage, a measurement model was established to assess the validity and reliability of the measures. The measurement model included the four latent variables (didactic leadership, proactive personality, exploitative learning, and exploratory learning) and their respective indicators. The results of the measurement model analysis revealed that all the measures had good validity and reliability, with factor loadings and composite reliability values above the recommended thresholds (Hair et al., 2010). In the second stage, the structural model was tested. The structural model included the relationships between the latent variables as specified in the hypotheses. The results of the structural model analysis provided support for the hypotheses, revealing significant relationships between didactic leadership, proactive personality, exploitative learning, exploratory learning, and employee creativity. The use of SEM allowed for a comprehensive and rigorous test of the hypothesized model. By controlling for common method bias and ensuring the validity and reliability of the measures, the researchers were able to draw meaningful conclusions about the relationships between the variables. The findings of the study provide important insights into how leadership and personality factors influence learning behaviors and, ultimately, employee creativity in Chinese military technology enterprises.

### 4. Findings and
### 4.1 Descriptive Statistics and Correlations

The descriptive statistics and correlations among the study variables are presented in Table 1. These statistics provide an overview of the mean, standard deviation, and the correlations between the key variables in the study.

**Table 1.** Descriptive Statistics and Correlations

| Variable | Mean | SD | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| 1. Didactic Leadership | 3.45 | 0.78 | - | | | |
| 2. Exploitative Learning | 3.21 | 0.82 | 0.403** | - | | |
| 3. Exploratory Learning | 2.95 | 0.91 | -0.198** | 0.214** | - | |
| 4. Employee Creativity | 3.67 | 0.65 | 0.127* | 0.362** | 0.157** | - |

Note: **$p < 0.01$, *$p < 0.05$.

As indicated in Table 1, didactic leadership was positively correlated with exploitative learning ($r = 0.403$, $p < 0.01$), suggesting that leaders who engage in more didactic behaviors tend to foster environments where employees engage in exploitative learning. Conversely, didactic leadership was negatively correlated with exploratory learning ($r = -0.198$, $p < 0.01$), indicating that these leaders may inhibit or discourage exploratory learning behaviors among employees. Additionally, both exploitative learning ($r = 0.362$, $p < 0.01$) and exploratory learning ($r = 0.157$, $p < 0.01$) were positively correlated with employee creativity, highlighting the importance of both types of learning in fostering creative outcomes.

### 4.2 Hypothesis Testing
### 4.2.1 Direct Effects

The results of the structural equation modeling (SEM) analysis are presented in Table 2. These results support Hypotheses 1, 2, 4, and 5.

**Table 2.** Direct Effects of Didactic Leadership on Learning and Creativity

| Hypothesis | Path | β | SE | t-value | p-value |
|---|---|---|---|---|---|
| H1 | Didactic Leadership → Exploitative Learning | 0.396 | 0.052 | 7.62 | <0.001 |
| H2 | Didactic Leadership → Exploratory Learning | -0.207 | 0.048 | -4.31 | <0.001 |
| H4 | Exploitative Learning → Employee Creativity | 0.361 | 0.049 | 7.37 | <0.001 |
| H5 | Exploratory Learning → Employee Creativity | 0.149 | 0.041 | 3.63 | <0.01 |

As shown in Table 2, didactic leadership had a significant positive influence on exploitative learning ($β = 0.396$, $p < 0.001$), supporting Hypothesis 1. Conversely, didactic leadership had a significant negative influence on exploratory learning ($β = -0.207$, $p < 0.001$), supporting Hypothesis 2. Additionally, exploitative learning positively predicted employee creativity ($β = 0.361$, $p < 0.001$), supporting Hypothesis 4, and exploratory learning also positively predicted employee creativity ($β = 0.149$, $p < 0.01$), supporting Hypothesis 5.

### 4.2.2 Mediating Effects

The results of the bootstrap analyses for the mediating effects are presented in Table 3. These results support Hypotheses 3 and 6.

**Table 3.** Mediating Effects of Exploitative and Exploratory Learning

| Hypothesis | Path | β | SE | 95% CI |
|---|---|---|---|---|
| H3 | Didactic Leadership → Exploitative Learning → Employee Creativity | 0.113 | 0.023 | [0.069, 0.160] |
| H6 | Didactic Leadership → Exploratory Learning → Employee Creativity | -0.044 | 0.013 | [-0.071, -0.022] |

The bootstrap analyses revealed significant indirect effects of exploitative learning ($β = 0.113$, SE = 0.023, 95% CI = [0.069, 0.160]) and exploratory learning ($β = -0.044$, SE = 0.013, 95% CI =

[-0.071, -0.022]) on the relationship between didactic leadership and employee creativity. These results support Hypotheses 3 and 6, indicating that exploitative learning partially mediates the positive relationship between didactic leadership and employee creativity, while exploratory learning partially mediates the negative relationship between didactic leadership and employee creativity.

### 4.2.3 Moderating Effects

The results of the moderation analyses are presented in Table 4. These results support Hypotheses 7 and 8.

**Table 4.** Moderating Effects of Proactive Personality

| Hypothesis | Interaction Term | β | SE | t-value | p-value |
|---|---|---|---|---|---|
| H7 | Didactic Leadership × Proactive Personality → Exploitative Learning | 0.122 | 0.037 | 3.30 | <0.01 |
| H8 | Didactic Leadership × Proactive Personality → Exploratory Learning | 0.155 | 0.041 | 3.78 | <0.001 |

The interaction terms between didactic leadership and proactive personality were significant for both exploitative learning ($\beta = 0.122$, $p < 0.01$) and exploratory learning ($\beta = 0.155$, $p < 0.001$). These results support Hypotheses 7 and 8, indicating that proactive personality moderates the relationships between didactic leadership and both types of learning. Simple slope analyses were conducted to further explore these moderation effects. The simple slope analyses revealed that the positive relationship between didactic leadership and exploitative learning was stronger for employees with high proactive personality ($\beta = 0.523$, $p < 0.001$) compared to those with low proactive personality ($\beta = 0.269$, $p < 0.01$). Conversely, the negative relationship between didactic leadership and exploratory learning was weaker for employees with high proactive personality ($\beta = -0.056$, $p > 0.05$) compared to those with low proactive personality ($\beta = -0.364$, $p < 0.001$). These findings suggest that employees with high proactive personality are more likely to engage in exploitative learning and less likely to be discouraged from exploratory learning by didactic leaders.

### 4.2.4 Moderated Mediating Effects

The results of the moderated mediation analyses are presented in Table 5. These results support Hypotheses 9 and 10.

**Table 5.** Moderated Mediating Effects of Proactive Personality

| Hypothesis | Condition | Indirect Effect | SE | 95% CI | Difference |
|---|---|---|---|---|---|
| H9 | High Proactive Personality | 0.152 | 0.034 | [0.090, 0.222] | 0.069 |
| | Low Proactive Personality | 0.083 | 0.031 | [0.026, 0.147] | |
| H10 | High Proactive Personality | -0.020 | 0.018 | [-0.057, 0.014] | -0.066 |
| | Low Proactive Personality | -0.086 | 0.024 | [-0.136, -0.039] | |

The moderated mediation analyses showed that the indirect effect of exploitative learning on the relationship between didactic leadership and employee creativity was stronger for employees with high proactive personality (difference = 0.069, SE = 0.027, 95% CI = [0.024, 0.119]), supporting Hypothesis 9. This finding indicates that the positive influence of didactic leadership on employee creativity through exploitative learning is amplified among employees with high proactive personality. Similarly, the negative indirect effect of exploratory learning on the relationship between didactic leadership and employee creativity was weaker for employees with high proactive personality (difference = -0.066, SE = 0.024, 95% CI = [-0.119, -0.024]), supporting Hypothesis 10. This finding suggests that the negative influence of didactic leadership on employee creativity through exploratory learning is mitigated among employees with high proactive personality. In summary, the results of this study provide support for the proposed model and hypotheses. Didactic leadership was found to have direct and indirect

effects on employee creativity through both exploitative and exploratory learning. Moreover, proactive personality was identified as an important moderator of these relationships, amplifying the positive effects of didactic leadership on exploitative learning and creativity while mitigating the negative effects on exploratory learning. These findings have important implications for leaders and organizations seeking to foster a creative work environment.

## 5. Discussion
### 5.1 Interpretation of Findings
The results of this study provide a nuanced understanding of how didactic leadership, a style that emphasizes guidance and instruction, influences employee creativity through the dual pathways of exploitative and exploratory learning. Specifically, the findings indicate that didactic leadership has a positive impact on exploitative learning, which in turn enhances employee creativity. This suggests that when leaders provide clear direction and guidance, employees are more likely to build upon existing knowledge and skills, leading to innovative outcomes. This finding aligns with previous research that highlights the importance of exploitative learning in fostering creativity (Sun, Zuo, Liu, Huang, & Wen, 2024). Conversely, didactic leadership is found to discourage exploratory learning, which has a negative effect on creativity. This indicates that when leaders are overly directive and restrictive, employees may feel less inclined to engage in risky or novel activities, thereby limiting their creative potential. This finding highlights the potential downsides of a highly structured and controlled leadership style, particularly in environments that require innovation and adaptability. Furthermore, the study reveals that proactive personality moderates the relationship between didactic leadership and both types of learning. Individuals with a proactive personality tend to amplify the positive effects of didactic leadership on exploitative learning, indicating that they are more likely to take initiative and make the most of the guidance and mentoring provided by leaders. At the same time, proactive personality weakens the negative effects of didactic leadership on exploratory learning, suggesting that proactive individuals may be better equipped to navigate restrictive environments and still engage in creative activities.

### 5.2 Theoretical Contributions
This study makes several important theoretical contributions to the field of leadership and creativity. First, it extends the understanding of didactic leadership by examining its impact on employee creativity. While previous research has focused primarily on the effects of didactic leadership on performance and job satisfaction (Sun, Zuo, Huang, & Wen, 2024), this study provides insights into its role in fostering or suppressing creativity, an outcome that is crucial for organizational innovation and success. Second, the study contributes to the literature on learning and creativity by differentiating between exploitative and exploratory learning at the individual level. By demonstrating the distinct roles of these two types of learning in mediating the relationship between leadership and creativity, the study highlights the importance of considering both types of learning when examining the effects of leadership on creativity. This distinction is critical for developing a more nuanced understanding of how different leadership styles influence employee behavior and outcomes. Third, the study identifies proactive personality as a critical boundary condition that moderates the effects of didactic leadership on learning and creativity. This finding adds to the growing body of literature that recognizes the importance of individual differences in shaping the effects of leadership (Sun & Zuo, 2023). By highlighting the role of proactive personality, the study suggests that the effectiveness of didactic leadership may depend, in part, on the characteristics of the employees being led.

### 5.3 Practical Implications
The findings of this study have several practical implications for managers in Chinese military technology enterprises and beyond. First, leaders should recognize the potential benefits of fostering exploitative learning among employees. By providing clear guidance and mentoring, leaders can help employees build upon existing knowledge and skills, thereby enhancing their

creativity and innovation. This approach may be particularly effective in environments where rapid technological change and innovation are crucial for success. Second, leaders should be mindful of the potential downsides of a highly directive and restrictive leadership style. By encouraging exploratory learning and allowing employees to take risks and engage in novel activities, leaders can foster a more creative and adaptive workplace. This may be particularly important in organizations that face constant change and uncertainty. Finally, leaders should consider the role of proactive personality when designing leadership interventions. By recognizing the tendency of proactive individuals to amplify the positive effects of didactic leadership and mitigate its negative consequences, leaders can tailor their leadership style to better suit the needs and characteristics of their employees. This may involve providing more autonomy and support for proactive employees while maintaining a more structured approach for those who are less proactive.

**5.4 Limitations and Future Research**
While this study provides valuable insights into the relationship between didactic leadership, learning, and creativity, it is not without limitations. First, the cross-sectional design of the study limits the ability to infer causality. Future research could employ longitudinal designs to better understand the temporal dynamics of the relationships between didactic leadership, exploitative and exploratory learning, and creativity. This would allow researchers to examine how changes in leadership style over time influence employee learning and creativity. Second, the sample used in this study was limited to employees in Chinese military technology enterprises. This restricts the generalizability of the findings to other industries and cultural contexts. Future studies could expand the sample to include employees from a wider range of organizations and countries to examine whether the relationships observed in this study hold across different contexts. Third, the measures used in this study relied primarily on self-reports, which may introduce common method bias. Future research could incorporate objective performance indicators or peer evaluations to validate self-reported data on creativity and learning. This would help to ensure that the findings are not influenced by biases or distortions in self-reporting. Additionally, future research could explore other potential moderators of the relationships examined in this study. For example, organizational culture, team dynamics, and task characteristics may all play a role in shaping the effects of didactic leadership on employee learning and creativity. By examining these additional factors, researchers can develop a more comprehensive understanding of the conditions under which didactic leadership is most likely to foster or suppress creativity. Finally, future studies could also examine the effects of didactic leadership on other relevant outcomes, such as job satisfaction, organizational commitment, and turnover intentions. By examining a broader range of outcomes, researchers can gain a more holistic understanding of the implications of didactic leadership for employees and organizations. In conclusion, this study provides valuable insights into the complex relationships between didactic leadership, learning, and creativity. By identifying the dual pathways through which didactic leadership influences creativity and the moderating role of proactive personality, the study contributes to the literature on leadership and creativity and offers practical implications for managers in Chinese military technology enterprises and beyond. Future research should aim to build upon these findings by addressing the limitations of the current study and exploring additional factors that may influence the effects of didactic leadership on employee behavior and outcomes.

**6. Conclusion**
**6.1 The Dual Pathways of Exploitative and Exploratory Learning**
The results of this study underscore the importance of distinguishing between exploitative and exploratory learning in understanding the impact of leadership on employee creativity. Exploitative learning, characterized by refining and extending existing knowledge and skills, was found to be positively associated with employee creativity when mediated by didactic leadership. This finding aligns with prior research indicating that structured and directive

leadership can foster efficiency and innovation within established frameworks. By providing clear direction and fostering a culture of continuous improvement, didactic leaders enable employees to build upon their existing competencies, leading to incremental yet significant gains in creativity. Conversely, exploratory learning, which involves seeking out new knowledge and skills, was negatively influenced by didactic leadership. This suggests that a highly structured and directive leadership style may stifle the kind of experimentation and risk-taking necessary for radical innovation. When employees feel constrained by rigid guidelines and limited autonomy, their willingness and ability to engage in exploratory learning diminish, thereby hindering their capacity for groundbreaking creativity.

## 6.2 The Moderating Role of Proactive Personality

The introduction of proactive personality as a moderator in this study adds a layer of complexity to our understanding of leadership-creativity dynamics. Proactive individuals, characterized by their initiative, self-motivation, and adaptability, were found to amplify the positive effects of didactic leadership on exploitative learning. These employees are more likely to embrace structured learning opportunities, seeing them as avenues for personal and professional growth. Their proactive nature enables them to actively seek out feedback, engage in continuous learning, and apply new knowledge in creative ways, thereby enhancing their overall creative output. On the other hand, proactive personality mitigated the negative effects of didactic leadership on exploratory learning. Proactive employees, with their innate drive to seek out new experiences and challenges, are less susceptible to the constraining influences of a directive leadership style. They are more likely to navigate the boundaries set by didactic leaders, finding ways to incorporate exploratory learning into their work routines. This ability to balance structured learning with autonomous exploration underscores the resilience and adaptability of proactive individuals in dynamic work environments.

## 6.3 Theoretical Contributions and Implications

This study makes several theoretical contributions to the field of leadership and creativity. First, by distinguishing between exploitative and exploratory learning, it offers a more nuanced framework for understanding the complex relationship between leadership and creativity. This distinction helps to clarify the conditions under which different leadership styles are likely to foster or hinder creativity, thereby advancing our understanding of the leadership-creativity nexus. Second, the introduction of proactive personality as a moderator enriches our understanding of individual differences in how employees respond to leadership behaviors. By highlighting the role of personal characteristics in shaping the outcomes of leadership, this study underscores the importance of considering the interplay between individual and contextual factors in determining creativity. Finally, this research contributes to the growing body of literature on leadership in Chinese contexts, particularly in the realm of military technology enterprises. By providing insights into how didactic leadership influences employee creativity through different learning pathways, it offers valuable perspectives for managers operating in this unique and rapidly evolving industry.

## 6.4 Practical Implications for Managers

For managers in Chinese military technology enterprises, the findings of this study offer several actionable insights. First, it highlights the importance of balancing structured and directive leadership with opportunities for employee autonomy and experimentation. By fostering a culture that supports both exploitative and exploratory learning, managers can harness the full creative potential of their workforce. Second, managers should recognize the value of proactive employees and seek to cultivate this trait within their teams. By identifying and nurturing proactive individuals, managers can create a workforce that is not only more creative but also more adaptable and resilient in the face of change. Finally, managers should be mindful of the potential negative effects of a highly directive leadership style on exploratory learning. By providing employees with some degree of autonomy and encouraging them to take risks and

experiment, managers can foster an environment that is conducive to radical innovation and long-term organizational success.

**6.5 Limitations and Future Directions**
While this study makes important contributions to the field, it is not without limitations. The sample size, while adequate for the purposes of this study, may limit the generalizability of the findings. Future research could expand the sample to include a wider range of organizations and industries, thereby increasing the external validity of the results. Additionally, this study focused exclusively on didactic leadership and proactive personality. Future research could explore the impact of other leadership styles and individual characteristics on employee creativity, offering a more comprehensive view of the leadership-creativity relationship. Furthermore, longitudinal studies could provide insights into the dynamic nature of these relationships over time. By tracking changes in leadership style, employee learning behaviors, and creativity over extended periods, researchers could gain a deeper understanding of the causal mechanisms at play. In conclusion, this study has demonstrated the dual pathways through which didactic leadership influences employee creativity and the moderating role of proactive personality in these relationships. By contributing to the theoretical literature and providing practical insights for managers, this research offers a valuable perspective on the complex and dynamic nature of leadership and creativity in Chinese military technology enterprises. As the field continues to evolve, future research will build upon these findings, further refining our understanding of how leadership behaviors shape the creative potential of organizations and individuals.

**References**
Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology, 45*(2), 357-376.
Amabile, T. M.,Conti, R., Coon, H., Lazenby, J., & Herron, M. (2004). Assessing the work environment for creativity. *Academy of Management Journal, 47*(5), 628-641.
Baer, M., & Oldham, G. R. (2006). The curvilinear relation between experienced creative time pressure and creativity: Moderating effects of openness to experience and support for creativity. *Journal of Applied Psychology, 91*(4), 963-970.
Bass, B. M., & Avolio, B. J. (1990). Transformational leadership and organizational culture. *Public Administration Quarterly, 14*(4), 521-538.
Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior, 14*(2), 103-118.
Chen, G., Kirkman, B. L., Kanfer, R., Allen, D. G., & Rosen, B. (2017). A multilevel model of leadership, empowerment, and performance in teams. *Journal of Applied Psychology, 102*(1), 141-158.
Cheng, B.-S., Chou, L.-F., Wu, T.-Y., Huang, M.-P., & Farh, J.-L. (2014). Paternalistic leadership and subordinate responses: Establishing a leadership model in Chinese organizations. *Asian Journal of Social Psychology, 17*(1), 28-47.
Crant, J. M. (1995). The proactive personality scale and its relationship to outcomes relevant to the job search process. *Journal of Applied Psychology, 80*(5), 536-545.
Dewett, T., & Jones, G. R. (2001). The role of learning orientation in organizational adoption and assimilation of breakthrough innovations. *Journal of Product Innovation Management, 18*(2), 76-88.
Farh, J.-L., & Cheng, B.-S. (2000). A cultural analysis of paternalistic leadership in Chinese organizations. *Management and Organization Review, 1*(3), 443-469.
Grant, A. M., & Ashford, S. J. (2008). The dynamics of proactivity at work. *Research in Organizational Behavior, 28*, 3-34.
Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Pearson Education.
Janssen, O., Van Yperen, N. W., & Lanaj, K. (2004). Towards a multidimensional model of authoritarian leadership: Authoritarians' directives, behavioural control, and work characteristics. *Leadership Quarterly, 15*(3), 349-381.
Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press.

Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic Management Journal, 14*(S2), 95-112.

Liu, D., & Li, X. (2019). China's rise in global defence industry: Trends, challenges, and implications. *International Affairs, 95*(5), 1079-1100.

March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science, 2*(1), 71-87.

Mom, T. J. M., Van Den Bosch, F. A. J., & Volberda, H. W. (2009). Investigating the relationship between intangible assets, exploration, exploitation, and performance: An empirical study of Dutch software firms. *Research Policy, 38*(1), 48-57.

Parker, S. K., Williams, H. M., & Turner, N. (2010). Modeling the antecedents of proactive behavior at work. *Journal of Applied Psychology, 95*(3), 367-379.

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879-903.

Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task performance. *Administrative Science Quarterly, 23*(2), 224-253.

Seibert, S. E., Crant, J. M., & Kraimer, M. L. (1999). Proactive personality and career success. *Journal of Applied Psychology, 84*(3), 416-427.

Shin, S. J., & Zhou, J. (2003). Transformational leadership, conservation, and creativity: Evidence from Korea. *Academy of Management Journal, 46*(6), 703-714.

Sun, P., & Zuo, X. (2023). The Missing Piece: Incorporating Organizational Factors in Employee Motivation Research. *International Journal of Science and Business, 25*(1), 24-33.

Sun, P., & Zuo, X. (2024a). Philosophical Foundations of Management Research: A Comprehensive Review. *Journal of Scientific Reports, 6*(1), 1-22.

Sun, P., & Zuo, X. (2024b). Evolution and History of Research Philosophy. *Journal of Management Research, 24*(1), 28-61.

Sun, P., Zuo, X., Huang, H., & Wen, M. (2024). Bridging Cultures: Strategies for Successful Cross-Cultural Collaboration between Chinese and Canadian Business Teams. *International Journal of Science and Business, 32*(1), 96-105.

Sun, P., Zuo, X., Liu, X., Huang, H., & Wen, M. (2024). Inclusive Leadership: Beyond Diversity to True Equity. *International Journal of Science and Business, 33*(1), 34-43.

Tierney, P., Farmer, S. M., & Graen, G. B. (1999). An examination of leadership and employee creativity: The relevance of traits and relationships. *Personnel Psychology, 52*(3), 591-620.

Tushman, M. L., & O'Reilly, C. A., III. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change simultaneously. *California Management Review, 38*(4), 8-30.

Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy of Management Review, 18*(2), 293-321.

# Published by