

A Cross-Level Perspective on Creativity: The Role of Learning Goal Orientation, Work Engagement, and Organizational Learning Climate

Wang, Wenzhuo (1); Sun, Yuchun (1); Xu, Zhenting (2); Qu, Yiyang (1)

1: Tongji University, China; 2: Linyi University, China

Abstract: Creativity is becoming increasingly vital to organizations in the context of ever-changing environment. This study integrated goal orientation theory, social cognitive theory and person-environment fit theory to construct the impact model of individual learning goal orientation and creativity, as well as discussed the effects of work engagement and organizational learning climate in their relationship. Using regression and hierarchical linear modeling methods, a sample of 765 employees nested in 30 organizations from China was empirically tested. Results indicate that learning goal orientation was positively related to creativity, work engagement partly mediated the relationship between learning goal orientation and creativity, and organizational learning climate had a positive cross-level moderating effect in the relationship of individual learning goal orientation and work engagement. This study also illustrated the contributions to the theory development and practical implications for managers.

Key words: learning goal orientation; creativity; work engagement; organizational learning climate

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INTRODUCTION

In recent years, creativity has attracted lots of attention from academics and practitioners, since creativity is a vital factor for organizations to survive in global economy and challenging environments (Oldham & Cummings, 1996; Zhou & George, 2001). Moreover, employee creativity is essential for organization sustainable innovation and further development in the context of ever-changing environment (Amabile, 1996; Shalley, 1991). Therefore, scholars and practicing managers are striving to find important antecedents of employee creativity.

Most creativity studies have adopted actor-centered approach and concentrated on the effect of individual differences (e.g., goal orientation). From learning and motivation perspective, steadily growing studies have built and tested the positive relationship between learning goal orientation and employee creativity (Simmons & Ren, 2009; Hirst et al., 2009). However, there has been lack of theoretical analysis and empirical evidence regarding the effect mechanism of learning goal orientation on creativity. Fortunately, scholars began to uncover this black box by exploring the mediator from psychological field. Several positive psychological factors (e.g., employee creative self-efficacy, positive psychological capital) were found to be function as a mediator in the relationship of learning goal orientation and creativity (Gong et al., 2009; Huang & Luthans, 2015), but the importance of individual work engagement has been overlooked. According to goal orientation theory, employees with learning goal orientation are willing to adjust their behaviors, make more effort to seek out the best solution to ensure that their goal (learning and improving knowledge and skills) are consistent with their behavior (learning opportunity and challenge searching). In order to achieve this purpose, high level of energy, strong work involvement and concentration, which are the essential components of work engagement, are needed. That is, learning goal orientation as an individual trait may enhance the employee work engagement (Jones et al., 2015). Meanwhile, researches have revealed that work engagement has a positive impact on individual level outcome, including task performance (Christian et al., 2011) and various types of relationship performance (Rich et al., 2010). As a positive affect and

work related state of mind, work engagement could foster the mood and resources which may lead to creativity (Toyama & Mauno, 2017). Moreover, based on social cognitive theory, directly experiencing the work task is the important way for individual to acquire knowledge and skills. Employees with learning goal orientation tend to develop an intrinsic motivation in the task itself. This leads to a deeper and more intensive engagement with the task, which usually results in employee creativity (Amabile, 1996). Therefore, the first purpose of this study was to build theory and test the effect mechanism of learning goal orientation on employee creativity concerning the mediating role of work engagement.

Furthermore, a few researches have investigated the interaction effect of certain individual differences and contextual influences on employee outcome. This highlights the crucial role of an interactionist theoretical perspective and emerges two basic patterns (Zhou & Hoever, 2014). In the field of goal orientation, first pattern shows the synergistic effect of interactive relationship of actor's characteristic and contextual influence. For example, Lee & Yang (2015) found that the positive relationship between individual learning orientation and information elaboration is stronger when work unit learning orientation is higher. Second pattern shows the remedial effect of interactive relationship of individual trait and contextual factor. For example, Hirst and colleagues (2009) found that the relationship of individual's goal orientation and creativity was contingent on team learning behavior. In the field of work engagement, previous studies have indicated that contextual factors may play an important role in the effect process of individual goal orientation on work engagement. For example, Jones and colleagues (2015) found out that the relationship of employee's learning goal orientation and work engagement was affected by the competitive working environment. According to person-environment fit theory, personal trait and environmental factor often work together on individual motivation and behavior. From the perspective of learning, organizational learning climate as an important environmental factor which afford learning opportunity and support may have crucial impact on individual engagement (Billett, 2001). However, the pattern of interaction effect of learning goal orientation and organizational learning climate has yet to be examined. To address this gap in the literature, we explore interaction effect by adopting the cross-level perspective to test the moderate role of organization learning climate. Thus, the second purpose of this study was to explore the moderating effect of organizational learning climate (organizational level) in the relationship of learning goal orientation and work engagement (individual level).

Drawing from goal orientation literature and creativity literature, we constructed a more

comprehensive analytical framework to better understand the effect mechanism of individual differences and organizational context on individual work engagement and creativity. Using learning and cross-level perspective, we developed and tested the model presented in Figure 1. First, we examined the direct effect of learning goal orientation on creativity. Second, we explored the mediating effect of work engagement between learning goal orientation and creativity. Finally, we tested the cross-level moderate role of organizational learning climate.

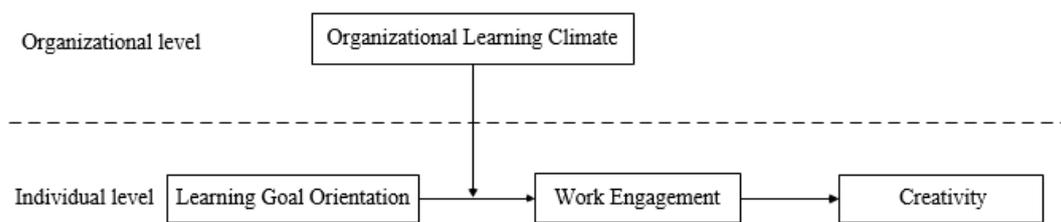


FIGURE 1. Theoretical Model

LITERATURE REVIEW AND HYPOTHESES

Learning Goal Orientation and Creativity

Learning goal orientation is derived from goal orientation theory, and goal orientation reflects a person's perception of development and attitude about personal ability during the process of achievement (Dweck, 1986). At the beginning of research, two dimensions of goal orientation are learning goal orientation and performance goal orientation. Learning goal orientation (LGO) is constructed as one dimension of goal orientation, which is to develop personal competence through mastering new knowledge and skills, seeking more challenges and learning from experience (VandeWalle, 1997). LGO employee believes that success is accomplished by unremitting efforts. Porter & Tansky (1996) argued that learning goal orientation can be considered as an individual's personal trait. This study adopt above definition and consider learning goal orientation as a stable personal trait.

Creativity is usually defined from the perspective of outcome or process in the field of organizational behavior. Employee creativity refers to ideas, products, processes, services or methods that are novel, original and useful (Woodman et al., 1993; Amabile, 1996; Oldham & Cummings,

1996). In the aspect of identifying antecedents of individual creativity, studies have been conducted focusing on the role of learning goal orientation.

Based on the Amabile's (1996) componential model of creativity and motivated information processing theory, the positive effect of learning goal orientation on creativity are mainly illustrated through three bridges, which are "acquisition of skills", "intrinsic motivation", and "learning".

First, studies indicated that LGO individuals focus on acquiring skills and knowledge (Kozlowski et al., 2001; Brett & Vandewalle, 1999). These skills includes domain-relevant skills and creativity-relevant skills which are the building blocks necessary for individual creativity (Amabile, 1996). Moreover, empirical studies of Hayes (1989) and Gardner (1993) showed that creativity are enhanced by acquisition of skills and knowledge.

Second, LGO individuals have stronger intrinsic motivation which is another building block necessary for individual creativity (Gong et al.2009; Amabile, 1996). This intrinsic motivation prompts LGO individuals to seek challenges (Vandewalle, 1997), lead them to focus on the development of deep-processing strategy in order to understand and master challenging tasks (Janssen & VanYperen, 2004), as well as involve them in creative activities to identify and apply the strategies to solving problems (Dweck, 1999).

Third, Amabile & Gryskiewicz (1987) pointed that learning has been essentially linked to creativity. Learning goal orientation could foster a learning process and internal motivated development of competence and expertise (Dweck, 1999). LGO individuals also seek learning opportunities and elaborate the knowledge which influence on individual creativity in turn (Vandewalle, 1997; De Dreu, Weingart & Kwon, 2000).

In addition, Redmond and colleagues (1993) advocated that learning orientation would flourish individual creativity in workplace. Other studies also supported the positive relationship between Learning goal orientation and individual creativity (Gong, Huang & Farh, 2009; Hirst et al., 2011).

Thus, based on previous studies and theory, we propose the following hypothesis:

Hypothesis 1: learning goal orientation is positively related to employee creativity (H1).

Mediating Role of Work Engagement

Previous researches have supported that engagement mediates the relationship between attitudinal antecedents and desired behavioral outcomes. Empirical studies showed that engagement displays greater explanatory power than related constructs, such as intrinsic motivation and job satisfaction (Macey & Schneider, 2008; Rich et al., 2010). The first purpose of this study is to explore the mediating effect of work engagement between learning goal orientation and employee creativity.

Initially, work engagement was defined as the fully investment of individuals in their work roles (Kahn, 1990). Then, the definition was developed as a positive, fulfilling work related state of mind (Schaufeli et al., 2002). This construct has three dimensions: vigor, dedication and absorption. Vigor means high levels of energy and willingness to work hard as well as persist in the face of difficulty. Dedication refers to strong work involvement and surround by the feeling of pride, inspiration, significance, enthusiasm and challenge. Absorption means focused on the work which led to feel that time seems to pass so fast and cannot separated oneself from the work. This sturdy of work engagement has been the most widely used paradigm in academic and practical area (Jeung, 2011). Work engagement is a more complex construct than the opposite of work burnout. An employee without work burnout may not be an engaged worker. Work engagement has been shown to be a good predictor of employee behavior and performance (Salanova et al., 2005). Therefore, scholars has already launched a series of studies about this construct. Kahn (1990) pointed out that lots of contextual and personal variables within organization can influence work engagement. At individual level, the study of antecedents of work engagement mainly focus on the demographics, personality trait and psychological capital (Kim, 2009; Langelaan, 2006; Sweetman, 2010). In recent years, scholars has begun to explore the effect of goal orientation on work engagement.

According to the Hackman and Oldham's (1976) and Kahn's (1990) theory, psychological meaningfulness, psychological safety, and psychological availability are the three psychological conditions which influence the work engagement of employees. Psychological meaningfulness indicated the match between the individual work purposes or goals and his/her own ideals or values. Through ones' work, people will feel the meaningfulness of their experience and the worthiness of what they have changed and the effort they put into work. May and colleague (2004) has empirical tested and confirmed that this three psychological conditions were positively related to engagement

and Psychological meaningfulness showed the strongest relationship.

Social cognitive theory indicated that the important way for individual to acquire knowledge and skills is directly experiencing the work task (Bandura, 1997). And according to the goal orientation theory, learning goal orientation will form an intrinsic interest of task itself. That is, learning goal orientation intrinsically motivated individuals to look for more experience and work tasks which can improve their competence in order to upgrade their skills and knowledge (Kozlowski, 2001). Proactively put oneself into more complicated tasks to learn new skills will lead LGO employee to experience more meaningful work tasks, which will increase the psychological meaningfulness of employee thus to improve his/her work engagement. Kanungo (1982) asserted that all kinds of work engagement should be derived from the individual's demand and the opportunity to fulfill this demand perceived from work. LGO employees prefer more challenging and complex work tasks (VandeWalle, 1997). When they get the opportunity of learning on the job through dealing with complex tasks, they will improve their work engagement to achieve the purpose of learning new knowledge and skills.

In addition, LGO employees believed that only persisting to invest effort can achieve success. They treated work as the process of learning and attribute the failure to insufficient effort or wrong strategy. Therefore, LGO employees will put more effort into work (Kohli et al, 1998) and through intensive effort in the work to identify and implement strategies which contribute to success (Dweck, 2000). Such employees tend to devote themselves to work and reach their goals by mastering new skill on the job. The studies showed that LGO employees will make more initiative effort in order to overcome the difficulties and obstacles in the work and consider dealing with challenges as the approach of improving skills (Kanter, 2000; Kozlowski et al., 2001). When encounter problems, LGO individuals tend to make more efforts to handle the challenge situation, adjust their behavior and willing to spend more time and energy to seek for the best solution (Peng, 2016). The effort caused by learning goal orientation will not bring negative psychological response and emotional exhaustion, instead, more positive state of mind is gained due to the expectation of getting harvest, which will prompt employees to be enthusiastic about their work and further enhance their work engagement. Moreover, previous research provides supportive empirical evidences that learning goal orientation can increase work engagement (Jones et al, 2015; Mehmood et al., 2016).

Thus, based on previous studies and theory, we propose the following hypothesis:

Hypothesis 2: learning goal orientation is positively related to work engagement (H2).

Kahn (1990) indicated that work engagement is a more positive work attitude and has more direct effect on employee's work performance. Moreover, the research result of Organ & Ryan (1995) showed the positive link between work engagement and task performance. As a specific aspect of task performance, creativity was expected to be enhanced by employee's work engagement.

First, work engagement is a positive affect and work related state of mind. The longitudinal diary study of Amabile and colleagues (2005) showed that positive affect has positive effect on creativity. Similarly, Oldham (2003) indicated that positive mood likely to enhance creativity. Positive mood makes individuals more prone to make connections between divergent stimuli (Isen 1999). This leads to a better integration of resources during problem solving that results in higher creativity. Positive mood also broaden individual's momentary thought-action repertoires which result in creativity (Fredrickson, 2004).

Second, high level of work engagement means high level of concentration, efforts and persistent, and also means that employees have an intrinsic motivation to drive themselves to implement actions (Xu et al, 2015). Employees with high level of work engagement are willing to input energy and spent time to focus on creative problem solving. Demerouti & Cropanzano (2010) pointed out that in order to achieve remarkable performance, engaged employees were open to new experiences and invest all their effort. Also, employees with high level of work engagement involved in deep-processing strategies such as information elaboration, which in turn facilitate individual creativity (Amabile, 1996). In the meanwhile, engaged employee who are persevering when facing challenges, dedicated and absorbed in work tend to use their expertise and skills in the service of creative performance. Recently, Bakker & Xanthopoulou (2013) and Toyama & Mauno (2017) provided empirical evidence which support the positive link between work engagement and creativity.

As discussed above, learning goal orientation may form an intrinsic motivation about task itself, and lead employee enhance their work engagement with the task, which often results in creativity. The nature of work engagement-positive emotions and motivation is likely to play a key role in the relationship between learning goal orientation and creativity.

Thus, based on Hypothesis 2 and previous studies, we propose the following hypothesis:

Hypothesis 3: work engagement is partly mediate the relationship between learning goal orientation and creativity (H3).

Moderating Role of Organizational Learning Climate

Although learning goal orientation is helpful to improve employee work engagement, this incentive effect may be varied in different organizational climate. Based on person-environment fit theory and trait activation theory, we propose that the influence of learning goal orientation on work engagement is not a simple direct effect but moderated by some contextual variables. That is, Organizational learning climate as an important contextual variable may moderate the relationship between learning goal orientation and work engagement.

Organizational Learning Climate (OLC) is derived from the concept of Learning Organization. Örtenblad (2002) pointed that Organizational Learning Climate is an understanding of Learning Organization. Meanwhile, Organizational Learning Climate is a specific type of organizational climate. Researchers believed that it is meaningless to talk about climate without clearly signified. Therefore, lots of researches turned to explore specific type of climate within organization, such as organizational safety climate, organizational innovation climate, etc. In essence, Organizational Learning Climate is an aspect of Learning Organization's climate. Since organizational climate can be understood as a direct manifestation of organizational culture (Schein, 1985), Organizational Learning Climate is a direct expression of organizational learning culture. Mikkelsen & Grønhaug (1999) indicated that Organizational Learning Climate refers to how an aggregate of organization members perceive specific organizational learning attributes, and the quality of Organizational Learning Climate can influence the effect of organizational learning. Bell and colleagues (2010) defined Organizational Learning Climate as a common perception of employees on workplace environment whether organizational management policy and reward system support or value learning and effectively lead to organizational internal learning behavior.

Person-Environment Fit Theory indicates that personal feature and contextual variable usually work together on individual outcome (Chatman, 1989; Terborg, 1981). In order to fully understand the effect of one factor (such as employee feature), the effect of other factors (such as contextual factors) also needs to be considered and examined simultaneously. Drawing from this perspective, employee work engagement may be influenced by the interaction of personal feature and contextual factor. That is, the degree of fit between individual learning goal orientation and Organizational Learning Climate to some extent determines employee work engagement. Organizational Learning Climate is closely

related with the acquisition of employee knowledge and skills which are driven by learning goal orientation and achieved by engaged in the work. Organizational Learning Climate is committed to sustainable development of organization, its purpose is to promote individual learning. Organization constructs learning climate means providing support for employee learning, creating learning approach and opportunity to encourage employees to improve their knowledge and skills through continuous learning behavior (Tasa, et al, 2007; Yang & Chen, 2005). When organization foster this learning climate matches the employee learning goal orientation, individual work engagement may be enhanced by their interaction effect.

Moreover, according to trait activation theory, individual's perception of context will moderate the effect of personal characteristic on individual motivation and behavior. Tett & Burnett (2003) indicated that personal traits are shaped by contextual characteristics. Certain specific work environments are better for certain personal characteristics person. LGO employee has strong intrinsic motivation to search learning opportunities to acquire new skill. Organization with learning climate expects and supports employee to learn new skill and knowledge, and reward their pursuing action. This promotion of learning and external reward may lead to employee's learning goal orientation trait activated (Tett & Burnett, 2003), make them fully express their own unique personality traits, result in better work engagement and performance. Therefore, Organizational Learning Climate is expected to play a positive role in promoting employees to achieve their learning goal, stimulate LGO employees to enhance their work engagement.

In addition, Organizational Learning Climate highlights mutual learning and cooperation among organization members, provides opportunity for individual learning, which as a supportive climate influence the attitude and behavior of organization internal employees (Workman, 1993). Organizational Learning Climate can foster a trust environment of knowledge sharing, and people tend to respect each other and give sincere feedback in this climate. LGO Individuals perceive this climate and have this supportive relationship with colleagues will suggest a positive effect on engagement (Schaufeli & Bakker, 2004).

Thus, based on previous studies and theory, we propose the following hypothesis:

Hypothesis 4: organizational learning climate will moderate the relationship between learning goal orientation and work engagement, such that the effect will be more positive in highly organizational learning climate. (H4).

METHODS

Sample and Procedures

The research sample of this study were knowledge employees from 30 multi-type companies which located in Shanghai, Beijing, Liaoning province, Shandong province and Zhejiang province in China. These companies are in trade, financial, biological pharmacy, software development industry. The strategy of these companies emphasize the need for creativity. Relying on the Internet platform, we designed online questionnaire and got the link address. We sent the link to our intermediary contact (mostly is HR director) in each company by email. These contact distributed the link to their company's employees. Each company used one unique link in order to form a group sample.

Total 861 employees completed the online questionnaire. We can check the answer time of each respondent on the website back end and exclude the samples of finished time less than 5 minutes (based on the average time to complete the survey). Finally, we obtained a sample of 765 employees nested in 30 organizations. Rate of valid questionnaire is 88.85%. Group (organization) size ranged from 25 to 31 members. 38.7 percent of respondents were female. For tenure and age, 37.1 percent of respondents chose the option of 4-10 years tenure and 53.6 percent chose the option of 26-35 years old. The majority of the sample (46.5%) had bachelor degree, while 11.1 percentage respondents had doctor's degree.

Measures

According to Brislin's (1980) translation-back-translation procedure, we created Chinese versions of all measures. All scales utilized a 5-point Likert scale with response options ranging from 1 = strongly disagree to 5 = strongly agree.

Learning goal orientation. VandeWalle (1997) developed goal orientation scales which contained 3 dimension and total 13 items. We assessed learning goal orientation by using the learning goal orientation dimension of this scale. An example of the five-item learning goal orientation scale is "I enjoy challenging and difficult tasks at work where I'll learn new skills." Cronbach's alpha coefficient in this study is .902

Organizational learning climate. We used the OLC measure developed by Marsick & Watkins (2003). This scale contained one dimension and total 13 items. A sample item is "In my organization, people openly discuss mistakes in order to learn from them." Cronbach's alpha coefficient in this study is .929

Work engagement. We used a 9-item short version scale from Schaufeli et al. (2006) which includes three dimensions of work engagement. Sample items include: Vigor, “At my work, I feel bursting with energy”; Dedication, “I am enthusiastic about my job”; Absorption, “I feel happy when I am working intensely.” Cronbach’s alpha coefficient in this study is .929

Creativity. The employee creativity scale contained 9 items used in this study was developed by Tierney et al. (1999). A sample item is “Identified opportunities for new products/processes.” Cronbach’s alpha coefficient in this study is .908

Control variables. We included gender, age, education and job tenure as statistical controls. These variables have been found to be associated with creativity (e.g., Tierney & Farmer, 2002; Zhou et al., 2012). We measured education level on a five-point scale (1= “Technical secondary school”, 2= “Junior college”, 3= “Bachelor”, 4= “Master”, 5= “PhD”), tenure level on a four-point scale (1= “1-3 years”, 2= “4-10 years”, 3= “11-20 years”, 4= “above 20 years”), age level on a four-point scale (1= “under 25”, 2= “26-35”, 3= “36-45”, 4= “above 45”) and gender as a dichotomous dummy variable (0=male and 1=female).

RESULTS

Construct Reliability and Validity

We conducted confirmatory factor analysis (CFA) on the four constructs of learning goal orientation, organizational learning climate, work engagement and creativity. The fit of a four-factor model was tested. Table 1 shows that the hypothesized four-factor demonstrated acceptable fit ($\chi^2(588)= 1520.567$, $p<0.001$; RMSEA=0.069, TLI=0.945, CFI=0.935). Moreover, all the factor loadings were significant, supporting convergent validity in this study.

To test the discriminant validity of our measures, the model fit of the hypothesized four-factor model was compared to a series of the nested alternative models. As presented in Table 1, the four-factor model fits the data best, suggesting support for the distinctiveness of the variables.

TABLE 1
Goodness of Fit Statistics

Model	χ^2	<i>Df</i>	χ^2/ Df	RMSEA	TLI	CFI
Four-factor model	1520.567	588	2.586	0.069	0.945	0.935
Three-factor model ^a	2304.338	591	3.899	0.087	0.810	0.822
Three-factor model ^b	2496.238	591	4.244	0.092	0.789	0.802
Three-factor model ^c	2759.142	591	4.669	0.098	0.760	0.755
Two-factor model ^d	3081.005	593	5.196	0.105	0.725	0.741
Two-factor model ^e	2982.472	593	5.029	0.103	0.736	0.752
One-factor model ^f	3995.549	594	6.727	0.123	0.625	0.646

Note. TLI= Tucker-Lewis index; CFI= comparative fit index; RMSEA= root mean square error of approximation

^a LGO and Creativity were loaded on one factor; ^b Work engagement and Creativity were loaded on one factor;

^c Work engagement and OLC were loaded on one factor; ^d LGO and Creativity were loaded on one factor, Work engagement and OLC were loaded on one factor; ^e LGO, Work engagement and Creativity were loaded on one factor; ^f All variables were loaded on one factor.

Organizational Level Data Aggregation Test

Analyses include individual- and organization-level constructs. We examined whether the data justified aggregation of organization-level constructs (organizational learning climate). According to one-way analysis of variance, organizational learning climate differed among groups ($p < .05$). Interclass correlation coefficients ($ICC(1) = .290$, $ICC(2) = .826$) for organizational learning climate were satisfactory and $R_{wg} = .886$ for organizational learning climate suggested adequate within-group agreement (The standard are $ICC(1) > .12$, $ICC(2) > .7$ and $R_{wg} > .7$). These results showed that aggregation of organizational learning climate was justified.

Descriptive Statistics and Correlation Analysis

Descriptive statistics and correlation of all variables are shown in table 2. Learning goal orientation was significantly and positively correlated with creativity ($r = .718$, $p < .01$) and work engagement ($r = .56$, $p < .01$), suggesting that our hypotheses H1 and H2 were preliminary support and conform to our theory expectation.

TABLE 2
Means, Standard Deviations, and Correlations

	Mean	SD	1	2	3	4	5	6	7
<i>Individual level</i>									
1. Gender ^a	1.67	.469	-						
2. Age	2.57	.926	.122*	-					
3. Education	2.69	.814	-.066	-.194**	-				
4. Tenure	2.05	2.526	.073	.476**	-.110*	-			
5. LGO	3.8184	.90602	-.068	.040	-.059	.053	(0.902)		
6 WE	3.6635	.87039	.032	.168**	-.109*	.099	.560**	(0.929)	
7. Creativity	4.0518	.73739	.081	.206**	-.120*	.121*	.718**	.691**	(0.908)
<i>Organization level</i>									
8. OLC	3.5846	.81914							

Note. N=765. Alpha coefficients are displayed on the diagonal. LGO: Learning goal orientation; WE: work engagement; OLC: Organizational learning climate.

^a Female=0, Male=1

* $p < 0.05$; ** $p < 0.01$.

Mediating Effect Testing

To test the mediating effect of work engagement, we performed hierarchical regression analyses according to Baron and Kenny (1986) procedures. Table 3 shows the detail information for this test. The model M1 indicates that age is positively related to work engagement. Model M2 shows that learning goal orientation is positively related to work engagement ($\beta = .534$, $p < .001$), hypotheses H2 is supported. After put control variables, Model M4 indicates that learning goal orientation is positively related to employee creativity ($\beta = .247$, $p < .001$), hypotheses H1 is supported. After entering learning goal orientation then work engagement, Model M6 shows that work engagement has significant effect on employee creativity ($\beta = .305$, $p < .001$), the effect of learning goal orientation on employee creativity is decline but still significant ($\beta = .168$, $p < .001$). Therefore, hypotheses H3 is supported and confirmed that work engagement has a partly medicating effect between learning goal orientation and employee creativity.

Table 3

Results of hierarchical regression analyses

Variables	Work engagement		Creativity			
	M1	M2	M3	M4	M5	M6
Control variables						
Gender	.014	.094	.017	.054	.012	.023
Age	.132*	.123**	.022	.018	-.028	-.023
Education	-.085	-.052	-.152*	-.137*	-.120*	-.119*
Tenure	.008	.000	-.022	-.026	-.025	-.026
Independent variable						
learning goal orientation		.534***		.247***		.168***
Mediator						
Work engagement					.375***	.305***
F	3.378*	38.572***	3.593**	12.319***	25.551***	21.854***
R ²	.035	.340	.037	.130	.255	.348
ΔR^2	.035*	.305***	.037**	.103***	.125***	.093***

*p<0.05, **p<0.01, ***p<0.001

Cross-Level Moderating Effect Testing

We use HLM to construct a Multilevel Model of individual learning goal orientation' effect on work engagement: first, establish null model (M1); second, investigate the direct effect of individual learning goal orientation on work engagement (M2); based on that, investigate the effect of organizational learning climate on work engagement (M3); finally, test the interaction effect of organizational learning climate and individual learning goal orientation on work engagement (M4). The results of this analysis are presented in table 4. The data of M2 shows that learning goal orientation has a positive relationship with work engagement (M2: $\gamma_{10} = .45$, $p < .01$). From M4 of table 4, we found a significant moderating effect of organizational learning climate between learning goal orientation and work engagement (M4: $\gamma_{11} = .09$, $p < .01$) and organizational learning climate can explain 9 percent of the Slope residual ($R^2_{\text{level-2 interaction effect}} = .09$), the hypotheses H4 is supported.

Table 4
Results of Hierarchical Linear Modeling

Variables		Work Engagement			
		M1	M2	M3	M4
Intercepts (γ_{00})		3.80**	3.67**	2.11**	1.66**
Control variables	Gender	.06	.06	.04	.03
	Education	.12	.10	.08	.08
Level-1-variables	LGO (γ_{10})		.45**	.36**	.30**
Level-2-variables	OLC (γ_{01})			.30**	.21**
Cross-level interaction variance	LGO*OLC (γ_{11})				.09**
	σ^2	.26	.22	.21	.21
	τ_{00}	.16	.15	.13	.08
	τ_{11}		.12	.11	.10
	$R^2_{\text{level-1}}^b$.15		
	$R^2_{\text{level-2 intercept term}}^c$.13	
	$R^2_{\text{level-2 interaction effect}}^d$.09

*p < 0.05, ** p < 0.01; σ^2 =level-1 residual; τ_{00} = level-2 Intercept residual; τ_{11} = Slope residual; R^2 =coefficient of Pseudo R^2 ; LGO= learning goal orientation; OLC= organizational learning climate.

Figure 2 graphically depicts the nature of the moderating effect. We plotted the slope tendency of the regression equation for the connection of learning goal orientation and work engagement according to the level of organizational learning climate (Cohen et al., 1983). The pattern indicates that the interaction function as predicted in the hypothesized manner. That is, highly organizational learning climate strengthen the positive link between learning goal orientation and work engagement.

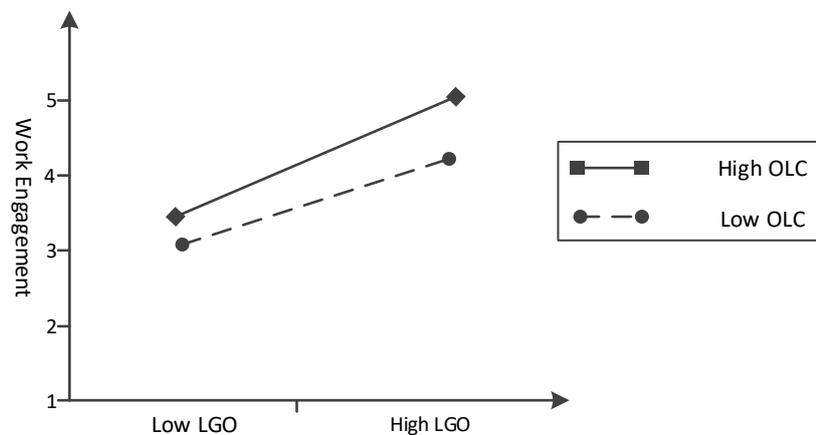


FIGURE 2. The moderation effect of OLC on the relationship between LGO and work engagement.

DISCUSSION

This study explored the effect mechanism of learning goal orientation on creativity by introducing the mediating role of work engagement. Moreover, the moderating effect of organizational learning climate between learning goal orientation and work engagement was examined by adopting a cross-level approach. The empirical results of this study based on the sample of 765 employees nested in 30 companies confirmed the partly mediating effect of work engagement and the moderating effect of organizational learning climate. From perspective of learning, influential factors of employee creativity were explored. The interactive effect of learning goal orientation and organizational learning climate suggests that employees with learning goal orientation have more “fit” with the learning organization, and also indicates that the match between individual and organizational characteristics leads to more positive outcomes.

Theoretical Implication

At present, lots of efforts and financial resources are put into studying and constructing learning organization in both practical and theoretical field. Fruitful research referring to learning issue of individual factors and organizational factors which influence employees' outcome are emerged. By testing the learning factors related to creativity, the theoretical contributions of this study are displayed mainly in three aspects as follows:

First, the finding of this study indicates that the effect of individual learning goal orientation on work engagement is significant across culture. Many scholars have conducted diversity studies on work engagement from the perspective of organizational culture, corporate social responsibility, leadership style and job resources etc. While the studies of learning goal orientation are mainly concentrated on creativity issue, rarely involve the discussion of work engagement. Employees with learning goal orientation tend to devote themselves into work to achieve the purpose of improving their competence by learning new skills and knowledge on the job. Hence, this study explored the effect of learning goal orientation on work engagement. In line with the study of Jones and colleagues (2015), our empirical results based on the sample of employees in China showed that individual learning goal orientation is positively related to work engagement in the context of Chinese culture.

Second, this study provides a new theoretical perspective for explaining the effect mechanism of

learning goal orientation on employee creativity. Drawing from goal orientation theory and social cognitive theory, we introduced work engagement into the effect process of learning goal orientation on individual creativity. The study findings confirmed that learning goal orientation not only directly influences creativity, but also indirectly facilitates employee creativity by improving work engagement.

Third, this study interprets the effect of learning goal orientation from the perspective of organizational learning climate and empirically tests the interaction effect of these two factors to estimate whether the effect of this interactive relationship is synergistic or remedial. In the meanwhile, few studies concerned the interaction effect of hierarchical factors on individual outcomes. Therefore, we first introduce organizational learning climate (organizational-level factor) as a moderate variable into the relationship between learning goal orientation and work engagement (individual-level factors), to enhance the contextual characteristic of the study. The results show that the supportive contextual factor may bring out the benefits of certain individual traits, and this synergistic effect of interactive relationship will improve the employee outcome. Theoretically, this study explains what kind of situation can stimulate individual learning goal orientation to produce higher work engagement, which supplements for both orientation theory and engagement theory.

Managerial Implication

In the context of global economy, enterprises are constantly looking for methods to improve employee creativity and work engagement in order to achieve organizational innovation and gain competitive advantage. Our study suggests that employees learning goal orientation is positively related to their work engagement and creativity. Employees with learning orientation are intend to make efforts, stay enthusiastic about the task and fully invest themselves into their work. Therefore, corporations need to take employee's learning goal orientation into account, and pay more attention to the evaluation and measurement during the talent recruitment and selection process. This may not only improve the chance of achieving organizational innovation, but also lay a foundation for corporations to obtain higher work engagement at the beginning of talent introduction.

In the meanwhile, HR practitioners should also be alert that only relying on LGO employee selection to promote engagement and creativity may not sufficient. Previous studies suggest employees with learning goal orientation may not enhance their engagement and creativity when the organizational context is unsupportive (Zhou & Hoever., 2014; Jones et al., 2015). Our findings

revealed that organizational learning climate can enhance the positive link between learning goal orientation and work engagement, which subsequently facilitates individual creativity. This finding highlights the importance of building learning organization. Corporations should construct organizational learning climate which is a good fit with LGO employees. For example, corporation should support employee learning behavior both spiritually and materially, provide more challenging tasks and learning opportunities, as well as establish recognition and reward system to motivate employees' learning orientation trait. Combine with this supportive organizational context, employee work engagement will be enhanced and yields stronger creativity.

Limitations and Future Directions

The measure scales of all constructs used in this study had good reliability and validity, but these scales were all developed under the background of Western culture. This may reduce the adaption of these scales and affect the understanding of items for employees in china due to the cultural differences between Chinese and Western world. Future study could develop new measure scales in the context of China and use it to survey Chinese employees. Moreover, data of this study were all collected from the same resource, which may cause the common method bias problem. In order to verify the influence of this problem, we performed Harman one-factor test by loading all items in this study into an exploratory factor analysis. 10 factors eigenvalues greater than 1 were extracted, with the first explaining just 31.26% of the total variance. This result shows that there is no single factor can account for a majority of the covariance. Therefore, the reliability of this study is not compromised. However, we still recommend that future research should use different data resource and more objective rating method to measure the constructs (especially, the creativity of employees).

This research is a cross-sectional study which cannot conduct a strict causal inference among the variables. Future study could use longitudinal method to test the casual relationship among these variables in order to enhance the accuracy and applicability of research conclusion. Other approaches (e.g. grounded theory method) are recommended to explore new mediator between learning goal orientation and creativity. Furthermore, this study analyzed the interaction effects from individual and organization level, preliminary confirmed the moderating effect of organizational learning climate between learning goal orientation and work engagement. Future study could add team level factors to construct a three-level model to further discuss the effect of learning goal orientation or other personal

feature and supportive or unsupportive contextual factors on work engagement and creativity. Comparing the different effect between team and organization level factors are needed.

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