

# Be creative as proactive? the impact of creative self-efficacy on employee creativity: a proactive perspective

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**Abstract** We develop and test a theoretical model of moderated mediation in which feedback-seeking behavior serves as an intervening mechanism that explains the association between creative self-efficacy and employee creativity. We also consider how regulatory focus influences the intervening role of feedback-seeking behavior in the creative self-efficacy-employee creativity relationship. To test our hypotheses, we conducted a Hierarchical Linear Modeling (HLM) with 331 subordinate-supervisor dyads from northeast China. In support of our hypotheses, feedback-seeking behavior mediated the relation between creative self-efficacy and individual creativity, and this mediation effect was moderated by promotion focus. We discuss implications of the study and offer suggestions for future research.

**Keywords** Creative self-efficacy · Feedback-seeking behavior · Employee creativity · Regulatory focus

## Introduction

Employee creativity plays a very important role for organizational innovation and effectiveness (Amabile 1996; Shalley

et al. 2004). Not surprisingly, then, scholars have put much focus on its antecedents. An expanded part of self-efficacy—creative self-efficacy, the belief that one has the knowledge and skills to perform creative tasks (Tierney and Farmer 2002, 2011)—is a key driver of employee creativity (Hu and Zhao 2016). Despite their valuable contribution, many of these investigations, as well as the broader self-efficacy literature, have overlooked self-regulation functions in social cognitive process (Bandura 1986; Bandura 2001). Individuals who feel capable of performing particular tasks tend to adopt more efficient task strategies to achieve their goals (Wood et al. 2001). Research indicates that efficacious individuals tend to be more flexible in absorbing information and new experiences (Gong et al. 2009) and show higher in levels of intrinsic motivation for the improvement of creativity (Wang et al. 2014), but little is known about the actions or strategies employees themselves may use to enhance their own creativity (Drazin et al. 1999).

As an important proactive behavior, feedback seeking has been identified as a key self-regulation tactic (Ashford and Tsui 1991), and it refers to employees making the effort to ask immediate supervisors for information concerning inadequacies in job behavior and job performance (Ashford 1986). The reasons efficacious employees use feedback-seeking behavior as a self-regulation strategy in the creative process are the following. First, self-efficacy is positively related to job attitudes and behaviors (Saks 1994). Individuals with higher self-efficacy are more likely to organize and execute courses of action required to achieve desired goals (Bandura 1986). Tierney and Farmer (2002) proposed that individuals with higher creative self-efficacy may be more likely to seek and integrate diverse information and that this tendency stimulates creative outcomes. Feedback is a valuable information resource, and it helps employees produce and achieve goals (Renn and Fedor 2001). Employees seek

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feedback to facilitate achievement of goals important to them; to evaluate their own work behavior and performance; and, thus, to succeed in their endeavors. Creative self-efficacy may inspire creative effort, but feedback seeking may determine creative self-efficacy's influence on creativity. Second, there is a phenomenon in organizations in which, on the one hand, it is difficult for supervisors to know the exact moments on the job when their employees desire feedback (Dobbins et al. 1990), and, on the other hand, employees do not think the feedback they passively receive from the organization is valuable to their job performance and further career development. Researchers have suggested that many employees have difficulties in obtaining valuable feedback information as they find themselves in a so-called "feedback vacuum" (Dobbins et al. 1990). To the extent that the phenomenon constrains the obtaining of employees' feedback information, employees need active feedback seeking to meet their needs for others' views on their new ideas, solutions, and performance. Along with the above argument, to understand the nature of the relationship between creative self-efficacy and employee creativity, we propose a mediation effect of feedback-seeking behavior on relationship between creative self-efficacy and employee creativity.

In addition to viewing feedback-seeking behavior as a mediator, in this study, we also want to determine whether the mediation effect of feedback-seeking behavior remains constant across different conditions. As such, we draw on regulatory focus to explain its potential moderating effect in the relationship between creative self-efficacy and employee creativity, via feedback-seeking behavior. Regulatory focus theory distinguishes two types of regulatory focus, promotion and prevention. They are two main constructs in self-regulation research (Brenninkmeijer et al. 2010). The two types of foci have pervasive impacts on the nature of goals pursued, on the way people process information and on their behavior approaches during goal pursuit (Higgins 1997). Feedback-seeking behavior is often psychologically risky for employees: its emphasis on self-initiation increases individual vulnerability to blame if proactive efforts are not successful (Parker and Wu 2014). Therefore, we suggest that regulatory focus, promotion and prevention, can influence the desire whether employees with creative self-efficacy seek feedback or not. This, in turn, influences employee creativity.

In this regard, our study is conducted with two aims. The first is to examine how feedback-seeking behavior mediates the relationship of creative self-efficacy and employee creativity. Second, we draw from regulatory focus theory (Higgins 1997) to explain how promotion and prevention focus influence the relationship between creative self-efficacy and feedback-seeking behavior and how this type of moderation influences the intervening role of feedback-seeking behavior in creative self-efficacy-employee creativity relationships. Figure 1 depicts the moderated mediation model, which we develop in the following sections.

## Theory and Hypotheses

### Creative Self-Efficacy and Employee Creativity

Facing the challenges native to creative task, individuals require some internal, sustaining force to make creative efforts (Amabile 1983; Bandura 1997). Strong efficacy beliefs can improve the persistence level and coping efforts when facing challenging circumstances. Social cognitive theory notes that individuals are motivated by judgments of their abilities to perform specific tasks and by the expectations of the outcomes of their activities (Bandura 1997). Such judgments of individuals' abilities and confidence are affected by their self-efficacy. Individuals with high self-efficacy can feel more confident and perceive difficulties as challenges; these individuals may also set high goals and endeavor more to overcome challenges.

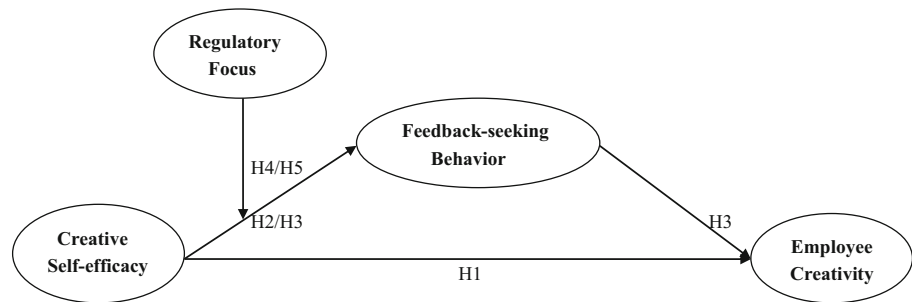
As an expanded part of self-efficacy, creative self-efficacy refers to the confidence that individuals have the knowledge and skills to perform creative tasks (Tierney and Farmer 2002, 2011). When occupied by creative activities, individuals with high creative self-efficacy can proactively engage with these creative challenges and meet situational demands. They emphasize creative cognitive processes in the production of ideas or solutions, and they endeavor more to find problems and generate ideas. Therefore, individuals with high creative self-efficacy can perform specific tasks confidently and successfully and attain organizational creative goals in the face of challenges (Gong et al. 2009; Tierney and Farmer 2002, 2011). Thus, we propose the following:

Hypothesis 1: *Creative self-efficacy has a positive effect on employee creativity.*

### Creative Self-Efficacy, Feedback-Seeking Behavior, and Employee Creativity

Drawing upon social-cognitive theory, we contend that employees with high creative self-efficacy are more likely to seek feedback, which, in turn, allows them to enhance their own creativity. Social-cognitive theory notes that self-efficacious individuals actively seek information resources, and, whereas the absence of resources may enhance the effort of self-efficacious individuals, it may constrain the effectiveness of these efforts (Bandura 2001). Considering that individual creativity relies heavily on the integration of information they seek and insights they analyze in the problems they encounter (Mumford and Gustafson 1988), information provided by others is a key resource for self-efficacious individuals to be creative. What is more, self-regulation behavior was very important in the creative process, and employees' feedback-seeking behavior was not just a strategy that adapts to the

Fig. 1 Research model



organization but a resource that generates creative output (De Stobbeleir et al. 2011). Employees who perceive creative self-efficacy are inclined to engage in plenty of information search (Tierney and Farmer 2002). They may be likely to access relevant work information that is needed for producing new and practical ideas and seeking feedback more frequently and broadly.

Individuals' creativity is partially the result of a social process in which others in their environment stimulate and support their creativity (De Stobbeleir et al. 2011; Xu et al. 2016). Zhou and Shalley (2008) indicated that feedback is a valuable information resource to promote creativity that may be particularly beneficial to employee creativity because it reduces the uncertainty associated with the changing nature of tasks. Feedback seeking can cause employees to adapt to continuously changing goals and expectations for the role, obtain more accurate self-concepts, and know more about new work (Ashford and Tsui 1991; Morrison and Weldon 1990). Employees that frequently seek feedback can get more information at work and generate creative ideas to solve problems in response to changing conditions in the organizations. Wang and Peng (2013) indicated that feedback-seeking behavior has a positive effect on innovation efficiency and creativity. Based on these arguments and evidence, we conceptualize feedback-seeking behavior as a mediator through which creative self-efficacy leads to employee creativity. Thus, the following hypotheses are developed:

Hypothesis 2: *Creative self-efficacy has a positive effect on feedback-seeking behavior.*

Hypothesis 3: *Feedback-seeking behavior mediates the relationship between creative self-efficacy and employee creativity.*

### The Moderating Role of Regulatory Focus

Regulatory focus theory (Higgins 1997) distinguishes two types of regulatory focus, promotion and prevention. At any point, individuals may engage in self-regulation with a promotion or prevention focus (Brockner et al. 2004). Individuals using either a promotion or a prevention focus desire to fulfill the task but differ in the methods with which they do so.

Individuals with a promotion focus are eager to attain a positive outcome, and goals are seen as hopes and aspirations. They focus on not having any errors of *omission*. Individuals with a prevention focus are vigilant to avoid behaviors that mismatch a goal and ensure safety and no losses (Higgins 1997). They focus on not having any errors of *commission* during task completion. Thus, promotion focus is attentive to the expected benefits, and prevention focus is attentive to the expected costs.

In the creative process, employees with high creative self-efficacy are inclined to engage in plenty of information search and access relevant work information that is needed for producing new and practical ideas. However, feedback seeking is often psychologically risky for employees (Parker and Wu 2014). Grant and Ashford (2008) indicated that proactive behavior is beyond the organizational minimum requirements for employees, occurring in unexpected occasions and surprising forms that exceed or deviate from the expectations of organizations and supervisors. Thus, occasionally, supervisors consider employee proactive behavior as a threat or ingratiation behavior in consideration of impression management (Bolino 1999). Regulatory focus influences individuals' information processing and behavior orientation and, thus, leads to different individual behavior (Wu et al. 2008). Thus, under a promotion focus, employees with high creative self-efficacy are inclined to use a positive strategy to respond to the situational demands. This positive strategy is characterized by a stronger preference to engage in errors of commission rather than omission and a desire not to miss any opportunities (Crowe and Higgins 1997). This leads to the display of more feedback information search. In contrast, under a prevention focus, employees with high creative self-efficacy, due to their receptivity to unfavorable cues, tend to adopt a more avoidant, vigilant approach not to seek feedback proactively (Higgins et al. 2000).

Furthermore, individuals with a promotion focus pay more attention to the importance of attaining accomplishments or fulfilling hopes and aspirations, and individuals with a prevention focus pay more attention to the duties and costs. When employees with high creative self-efficacy are attentive to the expected benefits, they may be more likely to seek and integrate diverse information even in the face of the risks of taking action, and that this tendency stimulates their creative

outcomes. When employees with high creative self-efficacy are attentive to the expected costs, they tend to use an avoidance strategy to minimize the “risk” of a risk-return dilemma, and, thus, not to attain their creative goals. Thus, we propose:

Hypothesis 4: *Regulatory focus, promotion and prevention, respectively moderates the relationship between creative self-efficacy and feedback-seeking behavior, positively and negatively.*

Hypothesis 5: *Regulatory focus, promotion and prevention, respectively moderates the indirect effect of creative self-efficacy on employee creativity, positively and negatively, through feedback-seeking behavior.*

## Methods

### Participants and Procedure

Participants were full-time employees from four state-owned enterprises including three banks and one manufacturing industry in northeast China. The reasons for focusing on state-owned enterprises were that, first, state-owned enterprises have certain representativeness of the Chinese cultural context and, second, the market-oriented reform of state-owned enterprises in China has increased the tension between the management and the employees (Cai 2002), which created uncertainty among employees. Employees in state-owned enterprises may need to get more valuable feedback information to enhance their own performance and creativity. We used two separate pen-and-paper questionnaires to minimize common method bias: one for subordinates and the other for their immediate supervisors. Each subordinate completed a scale of creative self-efficacy, feedback-seeking behavior, regulatory focus, and personal information. Supervisors rated each subordinate’s creativity. With the assistance of a human resources manager, we obtained a list of 370 randomly selected subordinates, and each was assigned an identification number to match responses with their direct supervisors’ evaluations. The first author visited all of the participants in person (groups of supervisors and subordinates separately) to explain briefly the purposes of the study and the procedures for implementing the survey. The participants received a cover letter explaining the study, a questionnaire, and a return envelope. To ensure confidentiality, the participants were instructed to complete questionnaires, seal them in the envelopes, and return them directly to us on site.

Of the 133 supervisor and 370 subordinate questionnaires distributed, 125 supervisor and 343 subordinate questionnaires were returned, representing response rates of 93.98% and 92.70%, respectively. A total of 331 pairs remained after

eliminating the uncompleted and unmatched questionnaires, yielding an effective response rate of 89.45%. Participants had the following characteristics: 45.02% of these participants were male. The average age was 29.73 (SD = 4.97) and the average organizational tenure was 6.52 years (SD = 5.40). Given the level of education, 84.63% had bachelor’s degrees, 10.32% had master’s degrees and above, and others had lower levels of education. In terms of the occupation, 20.43% participants were technical personnel, 20.82% were finance personnel, 25.44% were managerial personnel, 5.31% were production personnel, 11.53% were marketing personnel, and 16.65% were other personnel.

### Measures

Since all the scales in our survey were initially developed in English, we translated all of the scales into Chinese according to the process of translation and back-translation (Brislin 1980). First, the original scale was translated into Chinese by a bilingual professor. Then, another professor and two PhD students (all bilingual) translated the Chinese scales back into English. Finally, they compared the translated scales to the originals, and the four translators corporately resolved any minor translation issues. Otherwise noted, all items were scored on a 5-point Likert-type rating scale where “1” equaled “strongly disagree” and “5” equaled “strongly agree”.

#### Creative Self-Efficacy

We measured creative self-efficacy using the three-item scale validated by Tierney and Farmer (2002). The scale is widely used in research. The three items respectively are (1) “I have confidence in my ability to solve problems creatively”, (2) “I have a knack for further developing the ideas of others”, and (3) “I feel that I am good at generating novel ideas”. The Cronbach’s alpha for scale reliability was .85.

#### Feedback-Seeking Behavior

Some researchers suggest that supervisors and coworkers are the most practical and relevant feedback sources from the feedback recipient’s point of view (Ashford 1989). Most feedback seeking studies have assessed feedback seeking from supervisors. One exception is a scale by Callister et al. (1999); thus, we measured feedback-seeking behavior using the 11-item scale developed by Callister et al. (1999). Four items concerned feedback seeking from supervisors, and seven concerned feedback seeking from coworkers. To ensure the validity of responses, no names or other identifying characteristics were collected. The survey instrument included items measuring all variables. Four items from supervisors respectively are (1) “I often ask my supervisor if I am meeting all my

job requirements”, (2) “I often ask my supervisor how I am doing”, (3) “From watching my supervisor, I can tell how well I am performing my job”, and (4) “From watching my supervisor’s reactions to what I do, I can tell how well my supervisor thinks I am doing”. Seven items from coworkers respectively are (1) “I often ask my coworkers if I am doing a good job”, (2) “I often ask my coworkers if I am meeting my job requirements”, (3) “I often ask my coworkers if people like working with me”, (4) “I often ask my coworkers what other people think I should be doing”, (5) “From their reactions, I can tell how well I am getting along with members of my work group”, (6) “Because of the reactions I receive from my coworkers, I can tell whether I am doing the things that should be done”, and (7) “Through observing my coworkers’ reactions, I can tell how well they think I am doing”. The Cronbach’s alpha for scale reliability was .85.

### Regulatory Focus

We measured regulatory focus (promotion and prevention) using the 12-item scale developed by Wallace et al. (2009). Six promotion focus items respectively are (1) “I often get a lot of work finished in a short amount of time”, (2) “I often accomplish a lot at work”, (3) “I am focused on work activities that allow me to get ahead at work”, (4) “I am focused on my work accomplishments”, (5) “I often get my work done no matter what” and (6) “I am focused on how many job tasks I can complete”. Six prevention focus items respectively are (1) “I often follow rules and regulations at work”, (2) “I often complete work tasks correctly”, (3) “I often do my duty at work”, (4) “I am focused on my work responsibilities”, (5) “I often fulfill my work obligations”, and (6) “I am focused on the details of my work”. The Cronbach’s alpha for promotion focus was .80, and that for prevention focus was .90.

### Employee Creativity

The immediate supervisors’ perceptions of their subordinates’ creativity were measured with a 13-item scale developed by Zhou and George (2001). Each supervisor was asked to provide his or her own ratings of creativity for the rated subordinate. These items respectively are (1) “He or she often suggests new ways to achieve goals or objectives”, (2) “He or she often comes up with new and practical ideas to improve performance”, (3) “He or she often searches out new technologies, processes, techniques, and/or product ideas”, (4) “He or she often suggests new ways to increase quality”, (5) “He or she is a good source of creative ideas”, (6) “He or she is not afraid to take risks”, (7) “He or she often promotes and champions ideas to others”, (8) “He or she often exhibits creativity on the job when given the opportunity to”, (9) “He or she often develops adequate plans and schedules for the implementation of new ideas”, (10) “He or she often has new and

innovative ideas”, (11) “He or she often comes up with creative solutions to problems”, (12) “He or she often has a fresh approach to problems”, and (13) “He or she often suggests new ways of performing work tasks”. The Cronbach’s alpha for scale reliability was .94.

Prior research has shown that gender, age, organizational tenure, and educational level each influence feedback-seeking and employee creativity (Mittal and Rajib 2015). Therefore, they were included as control variables. For example, gender was measured and coded with male as 1 and female as 2; organizational tenure was measured with the following items: “How long have you worked in your current position?” participants indicated the number of years and months.

### Data Analysis

Because individual participants were nested within groups (under the same supervisor within a group), we chose Hierarchical Linear Modeling (HLM) to test our hypotheses (Raudenbush et al. 2004). Prior to our analysis, we checked independence in supervisor ratings of employee creativity (Kenny et al. 2006). We computed an ICC (1) coefficient to test for independence in supervisor ratings of employee creativity (Bliese 2000). The obtained ICC value of .36 indicated a high supervisor-level effect and did not provide support for the assumption of independence in our analyses.

## Results

### Confirmatory Factor Analysis

To examine the distinctiveness of the variables studied, we conducted a confirmatory factor analysis to examine the distinctiveness of creative self-efficacy, feedback-seeking behavior, employee creativity and regulatory focus using Amos20.0. We used three criteria to assess overall model fit: RMSEA lower than .06, and TLI and CFI higher than .90 (Hu and Bentler 1999). The results of the confirmatory factor analysis did not support a five-factor model very well (CFI = .89, RMSEA = .07, CMIN/DF = 2.64, TLI = .88), containing creative self-efficacy, feedback-seeking behavior, promotion focus, prevention focus and employee creativity. However, we then allowed for the error covariance between two of the feedback-seeking behavior items, “watching my supervisor” and “watching my supervisor’s reactions to what I do” for their similarity (Hu and Bentler 1999). The five-factor model that allowed the error covariance fit the data well (CFI = .94, RMSEA = .05, CMIN/DF = 1.95, TLI = .93). The CFI and RMSEA were close to .94 and .05, respectively.

**Table 1** Means, standard deviations, correlations, and reliabilities (in bold)

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Age	29.73	4.97									
2. Gender <sup>a</sup>	1.55	.49	.01								
3. Education <sup>b</sup>	2.05	.38	.04	.02							
4. Organizational tenure	6.52	5.40	.92**	.06	-.09						
5. CSE	3.54	.84	.03	-.15**	.02	.05	<b>(.85)</b>				
6. Prev	4.11	.72	.06	-.03	.06	.11*	.25**	<b>(.90)</b>			
7. Prom	3.48	.78	.08	-.08	-.03	.12*	.30**	.53**	<b>(.80)</b>		
8. FSB	3.38	.73	.03	-.01	-.04	.06	.33**	.23**	.38**	<b>(.85)</b>	
9. EC	3.82	.68	.01	-.02	-.03	.03	.12*	.17**	.19**	.16**	<b>(.94)</b>

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ,  $N = 331$  for subordinates, 125 for supervisors; Gender<sup>a</sup> (“1” male; “2” female). Education<sup>b</sup> (“1” high school and below; “2” junior college; “3” bachelor and above); CSE = creative self-efficacy; Prev = prevention focus; Prom = promotion focus; FSB = feedback-seeking behavior; EC = employee creativity. The numbers in bold on the diagonal are the alphas

## Descriptive Statistics

Table 1 presents the means, standard deviations, correlations and reliability coefficients among the study variables. The results presented in Table 1 show that creative self-efficacy had a positive effect on employee creativity ( $r = .12$ ,  $p < .05$ ); a positive relationship between creative self-efficacy and feedback seeking behavior ( $r = .33$ ,  $p < .01$ ) and a positive relationship between feedback-seeking behavior and employee creativity ( $r = .16$ ,  $p < .01$ ).

## Hypothesis Testing

We used Hierarchical Linear Modeling (HLM) to test our hypotheses. Table 2 presents the results of HLM analyses

**Table 2** HLM analysis results for feedback-seeking behavior as mediator

Variable	Model 1		Model 2		Model 3	
	$\gamma$	SE	$\gamma$	SE	$\gamma$	SE
Intercept	3.30***	.05	3.34***	.04	3.30***	.05
Controls						
Age	-.01	.02	.00	.01	-.01	.01
Gender <sup>a</sup>	.00	.09	.09	.06	-.03	.08
Education <sup>b</sup>	-.01	.11	-.19	.09	.05	.11
Organizational tenure	.02	.02	-.00	.01	.02	.01
Independent variables						
CSE	.13*	.05	.26***	.04	.03	.05
Mediator						
FSB					.38***	.06
R <sup>2</sup>		.08		.28		.25

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ,  $N = 331$  for subordinates, 125 for supervisors; Gender<sup>a</sup> (“1” male; “2” female). Education<sup>b</sup> (“1” junior college and below; “2” bachelor’s degree; “3” master’s and above); CSE = creative self-efficacy; FSB = feedback-seeking behavior; EC = employee creativity

performed to test hypotheses 1, 2 and 3. Hypothesis 1 anticipated that creative self-efficacy has a positive effect on employee creativity. Results showed that creative self-efficacy increased employee creativity ( $\gamma = .13$ ,  $p < .05$ , Model 1). Hypothesis 2 anticipated that creative self-efficacy has a positive effect on feedback-seeking behavior. Results showed that creative self-efficacy increased feedback-seeking behavior ( $\gamma = .26$ ,  $p < .001$ , Model 2). Thus, hypotheses 1 and 2 were supported.

In hypothesis 3, we theorized that feedback-seeking behavior mediates the effects of creative self-efficacy on employee creativity. We used Baron and Kenny’s (1986) three-step method to test the mediation hypothesis. This method was also used for multilevel mediation models (Krull and MacKinnon 2001). For employee creativity, all three conditions were supported. We found that independent variable (creative self-efficacy) (as reported on Model 1 of Table 2) was positively associated with dependent variable (employee creativity) ( $\gamma = .13$ ,  $p < .05$ , Model 1). Creative self-efficacy was associated with the mediator, feedback-seeking behavior ( $\gamma = .26$ ,  $p < .001$ , Model 2). Finally, for Model 3, when feedback-seeking behavior was included in the regression model, the association of creative self-efficacy with employee creativity was not significant ( $\gamma = .03$ , *ns*, Model 3), and the association of feedback-seeking behavior with employee creativity was significant ( $\gamma = .38$ ,  $p < .001$ , Model 3). Therefore, there was strong evidence for the mediation of feedback-seeking behavior in the relationship between creative self-efficacy and employee creativity. Thus, hypothesis 3 was supported.

Hypothesis 4 anticipated that regulatory focus, promotion and prevention, respectively moderates the relationship between creative self-efficacy and feedback-seeking behavior, positively and negatively. Tables 3 and 4 show the results of HLM analyses performed to test hypotheses 4. The results on Table 3 showed that promotion focus had a moderating effect on the relationship between creative self-efficacy and feedback-seeking behavior ( $\gamma = .07$ ,  $p < .05$ , Model 3). To

**Table 3** HLM analysis results for promotion focus as moderator

Variable	FSB						EC		
	Model 1		Model 2		Model 3		$\gamma$	$\gamma$	SE
	$\gamma$	SE	$\gamma$	SE	$\gamma$	SE			
Intercept	3.34***	.04	3.35***	.03	3.35***	.03	3.30	.05	
Controls									
Age	.00	.01	.00	.01	.00	.01	-.01	.01	
Gender <sup>a</sup>	.09	.06	.12	.06	.13*	.06	.01	.08	
Education <sup>b</sup>	-.19	.09	.12	.06	-.14	.08	.07	.11	
Organizational tenure	-.00	.01	-.00	.01	-.00	.01	.02	.01	
Independent variables									
CSE	.26***	.04	.20***	.04	.20***	.04	.02	.05	
Moderator									
Prom			.28***	.04	-.07	.18	-.30	.24	
CSE × Prom					.07*	.03	.11*	.05	
Mediator									
FSB							.28***	.07	
R <sup>2</sup>		.28		.21		.44		.29	

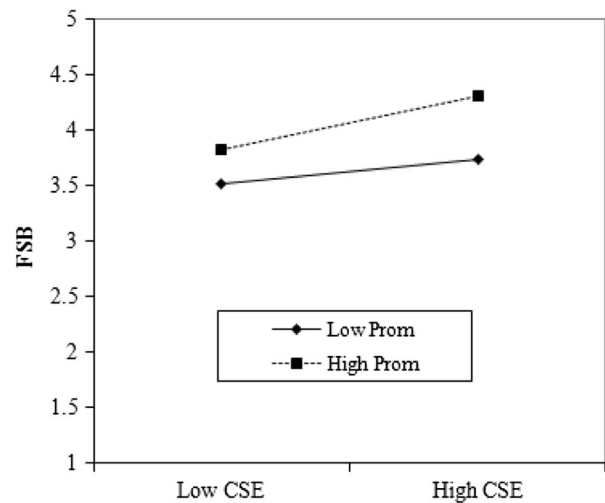
\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ,  $N = 331$  for subordinates, 125 for supervisors; Gender<sup>a</sup> (“1” male; “2” female). Education<sup>b</sup> (“1” junior college and below; “2” bachelor’s degree; “3” master’s and above); CSE = creative self-efficacy; Prom = promotion focus; FSB = feedback-seeking behavior; EC = employee creativity

explain the moderating role of promotion focus further, we have drawn Fig. 2 according to the method used by Aiken and West (1991). Figure 2 depicts the relation between

**Table 4** HLM Analysis Results for Prevention Focus as Moderator

Variables	FSB					
	Model 1		Model 2		Model 3	
	$\gamma$	SE	$\gamma$	SE	$\gamma$	SE
Intercept	3.34***	.04	3.34***	.03	3.35***	.03
Controls						
Age	.00	.01	.01	.01	.01	.01
Gender <sup>a</sup>	.09	.06	.09	.06	.08	.06
Education <sup>b</sup>	-.19	.09	-.22*	.08	-.21*	.08
Organizational tenure	-.00	.01	-.01	.01	-.01	.01
Independent variables						
CSE	.26***	.04	.23***	.04	.22***	.04
Moderator						
Prev			.19***	.04	-.14	.21
CSE × Prev					.07	.04
R <sup>2</sup>		.28		.17		.46

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ,  $N = 331$  for subordinates, 125 for supervisors; Gender<sup>a</sup> (“1” male; “2” female). Education<sup>b</sup> (“1” junior college and below; “2” bachelor’s degree; “3” master’s and above); CSE = creative self-efficacy; Prev = prevention focus; FSB = feedback-seeking behavior; EC = employee creativity



**Fig. 2** The moderating effect of promotion focus on the relationship between creative self-efficacy and feedback-seeking behavior. FSB = feedback-seeking behavior; CSE = creative self-efficacy; Prom = promotion focus

creative self-efficacy and feedback-seeking behavior at both low and high level of promotion focus; the relation is stronger when promotion focus is high rather than low. The results on Table 4 demonstrated that prevention focus had no moderating effect on the relationship between creative self-efficacy and feedback-seeking behavior ( $\gamma = .07$ , *ns*, Model 3). Thus, the moderating effect of promotion focus was supported, and the moderating effect of prevention focus was not supported.

Hypotheses 5 anticipated that regulatory focus, promotion and prevention, respectively moderates the indirect effect of creative self-efficacy on employee creativity, positively and negatively, via feedback-seeking behavior. The results on Table 3 demonstrated that promotion focus moderated the indirect effect of creative self-efficacy on employee creativity via feedback-seeking behavior ( $\gamma = .28$ ,  $p < .001$ ). As the precondition of the moderated mediation for prevention focus was not supported (Model 3 on Table 4), there was no need to go further step. Hence, the moderating effect of promotion focus on the indirect effect was supported, and the moderating effect of prevention focus on the indirect effect was not supported.

## Discussion

The topic of creative self-efficacy and creativity has received attention by researchers and organizations. What remains to be answered is how and when creative self-efficacy contributes to employee creativity. In the present study, we tried hard to answer this question by developing and testing a model that links creative self-efficacy with employee creativity while observing the underlying mechanisms. The results revealed that (a) creative self-efficacy had a positive effect on employee creativity, (b) feedback-seeking behavior mediated the

relationship between creative self-efficacy and employee creativity, and (c) promotion focus moderated the relationship between creative self-efficacy and employee creativity via feedback-seeking behavior.

### Theoretical Implications

The present research has a number of theoretical implications regarding creative self-efficacy and employee creativity. To begin with, our study adds to the creativity literature by testing a model that examines how creative self-efficacy and feedback-seeking behavior contribute to creativity. Taking self-regulation focus on creative process, we found that feedback-seeking behavior is a relevant intervening variable in the relationship between creative self-efficacy and employee creativity. In support of this perspective, the positive relationship between creative self-efficacy and employee creativity was mediated by feedback-seeking behavior. These findings testify to the viability of the impact of the feedback-seeking behavior on the relationship between creative self-efficacy and employee creativity. This viability suggests that employees with creative self-efficacy can use a proactive self-regulatory strategy to enhance their own creativity. Furthermore, our emphasis on feedback seeking provides a clear way of looking at the proactive behavior, in which individuals tend to take control to make things happen rather than watching things happen and strive to change themselves or their environment to achieve career success (Grant and Ashford 2008). This examination of individual behaviors supplements a robust literature on personal predictors of creativity.

Research has shown that self-efficacy is related to achievement motivation traits (Chen et al. 2004). Individuals with different regulatory focus may differ in the method to fulfill the task. Therefore, the findings tested the moderating role of promotion and prevention focuses in the feedback-seeking behavior's intervention in the creative self-efficacy–employee creativity relationship. The moderating role of prevention focus was not supported since feedback-seeking behavior is a risk behavior to some degree, and individuals in a prevention focus hold security and conformity values, so they prefer to adopt a “doing nothing” strategy to ensure their own security. The results showed that self-efficacious individuals in a promotion focus would be more likely to seek feedback actively and obtain more valuable information for their creative ideas and solutions, leading to increased creativity. This is conducive to a deepened understanding of the boundary function of motivation, also providing a reference for future research.

### Practical Implications

First, findings suggest that organizations need to stimulate employees' feedback-seeking behavior to enhance their creativity. To stimulate employees' feedback-seeking behavior,

organizations need to develop employees' creative self-efficacy. Since no one is born with creative self-efficacy, creative self-efficacy can be developed through training and effective management in the workplace (Grist and Mithchell 1992). For example, organizations can initiate creativity-motivating activities, such as the internal contest and innovation award, and encourage employees to participate in such activities. When employees feel confident and flexible in facing creative tasks, they tend to seek and integrate diverse information and that this tendency stimulates their creativity. Furthermore, to stimulate employees' feedback-seeking behavior and enhance their creativity, organizations need take steps to reduce or eliminate obstacles and psychological risk associated with feedback-seeking behavior. Organizations may create a good “feedback environment” (Steelman et al. 2004), in which employees can seek informal feedback spontaneously throughout an organization.

Second, findings concerning the moderating role of regulatory focus suggest that organizations should identify employees' regulatory focus to arrange the corresponding positions and jobs. Employees with a promotion focus have more adventurous and innovative spirits; thus, creative work is more suitable to them. Findings also suggest that organizations need to be mindful that selecting or training employees based on their creative self-efficacy alone will not guarantee increasing creativity, for regulatory focus of employees will provide the driving forces for their creative self-efficacy to bring forth creativity.

### Limitations and Future Research

Despite the findings, this study has limitations. One limitation is that the data were collected cross-sectionally. Causal research requires that the independent variable occur prior to the dependent variable (Shadish et al. 2002). While it is logical to assume that creative self-efficacy precedes feedback-seeking behavior, causation can only be inferred from the relationships found in the data. Future research should retest the hypotheses using a design that allows causality to be more conclusively determined such as a longitudinal field survey.

There remain several avenues for further inquiry. First, our emphasis on feedback seeking provides a clear way of looking at the proactive behavior. This evidence of the feedback seeking of creative self-efficacy's influence invites future research in creative self-efficacy to explore other strategies such as taking charge, individual innovation, and job change negotiation from which individuals benefit.

Second, considerable research has shown individual and situational factors that facilitate employee creativity (Shalley et al. 2004), so we suggest that future research examine the interaction role of the two factors on the creativity, thereby contributing to the development of a more comprehensive account of the link between individual attributes and creativity.



## Conclusion

Prior research has shown significant, but not consistently solid, relations between creative self-efficacy and employee creativity. In line with social cognitive theory's description of highlighting self-regulation functions in social cognitive process, we find that feedback-seeking behavior determines the influence of creative self-efficacy on employee creativity and, furthermore, that promotion focus moderates the relation between creative self-efficacy and employee creativity via feedback-seeking behavior. The study testifies to the suitability of a proactive perspective missing in the study of creative self-efficacy and employee creativity and complements prior motivation research by considering regulatory focus as a boundary condition that affects individuals' processing and behavior orientation and, thus, leads to differing individual behavior.

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### Compliance with Ethical Standards

**Animal Studies** This article does not contain any studies with animals performed by any of the authors.

**Informed Consent** Informed consent was obtained from all individual participants included in the study.

**Conflict of Interest** Yanhong Chen. Research interests include organizational behavior and human resource, proactive behavior, creativity, leadership etc.

Li Zhang. Research interests include organizational behavior and human resource, leadership, work-family balance, etc.

The authors declare that they have no conflict of interest.

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