

9-7-2013

The Interactive Effects of Self-Perceptions and Job Requirements on Creative Problem Solving

Erika J. Robinson-Morrall

Roni Reiter-Palmon

James C. Kaufman

Follow this and additional works at: <https://digitalcommons.unomaha.edu/psychfacpub>

 Part of the [Psychology Commons](#)

The Interactive Effects of Self-Perceptions and Job Requirements on Creative Problem Solving

Erika J. Robinson-Morrall

Roni Reiter-Palmon

James C. Kaufman

ABSTRACT

Over the years, researchers have focused on ways to facilitate creativity in the workplace by looking at individual factors and organizational factors that affect employee creativity (Woodman, Sawyer, & Griffin, 1993). In many cases, the factors that affect creativity are examined independently. In other words, it is uncommon for researchers to look at the interaction among individual and organizational factors. In this study, it is argued that to get a true understanding of how to maximize creativity in the workplace, organizational researchers must look at the interaction between organizational factors and individual factors that affect employee creativity. More specifically, the current study looked at an individual's perceptions about his or her ability to be creative (i.e., individual factor) and perceptions of requirements for creativity in the workplace (i.e., an organizational factor). The results indicated that individuals who have a high belief about their ability to be creative (an individual factor) were most creative when they also perceived requirements for creativity in the workplace (an organizational factor). Furthermore, individuals who had low perceptions of creative ability were still able to perform creatively when they had high perceptions of requirements for creativity. This suggests that, to maximize creativity, organizations should focus on both individual and organizational factors that affect employee creativity.

Keywords:

creativity, creative problem solving, interacting effects, individual factors, organizational factors.

Creativity in the workplace is an emerging field, and research in this area has been growing steadily over the years. Researchers have focused on ways to facilitate creativity in the workplace. Creativity in the workplace can be influenced by organizational characteristics (George, 2007; Shalley & Zhou, 2008) and individual characteristics (Basadur, Runco, & Vega, 2000; Ward, Smith, & Finke, 1999). On the

individual side, researchers have looked at constructs such as cognition, personality, and affect. On the organizational side, researchers have focused on factors such as leadership, group work, and organizational climate.

One individual component that may play a role in workplace creativity is that of self-efficacy. Self-efficacy is a belief that one has the ability to achieve a specific level of performance in a specific situation (Bandura, 1977, 1986). Although the original definition of self-efficacy focuses on performance in a specific situation, self-efficacy has also been discussed as a general construct in which individuals have a stable belief about their ability to perform in any given situation (Judge, Erez, & Bono, 1998). Other researchers have pursued more specific efficacy, exploring the existence and role of creative self-efficacy in creativity. Creative self-efficacy is defined as an individual's belief regarding his or her ability to be creative (Tierney & Farmer, 2002).

Creative self-efficacy as a construct has been predictive of creativity across a variety of studies in differing settings. Creative self-efficacy has been related to creativity in individual employees (e.g., Tierney & Farmer, 2004) as well as team creativity (Shin & Zhou, 2007). Furthermore, the relationship has been demonstrated across a variety of settings and industries, including education (Beghetto, 2006; Shin & Zhou, 2007), manufacturing and operations, finance (Carmeli & Schaubroeck, 2007), insurance (Gong, Huang, & Farh, 2009; Jaussi, Randel, & Dionne, 2007), and research and development (Tierney & Farmer, 2004). In addition to serving as an antecedent for creativity, creative self-efficacy has acted as mediator between variables including transformational leadership and creativity, as well as employee learning orientation and creativity (Gong et al., 2009). Team creative self-efficacy has mediated the moderated relationship between and transformational leadership, educational specialization heterogeneity, and team creativity (Shin & Zhou, 2007). Creative self-efficacy in the workplace has also been examined longitudinally. In one study, employee creative self-efficacy increased over a 6-month period when employees experienced a creative role identity and perceived an expectation of creativity from a supervisor (Tierney & Farmer, 2011). Taken together, these studies suggest that creative self-efficacy has a positive effect on creativity, especially when coupled with other variables including transformational leadership and perceived requirements for creativity.

Although creative self-efficacy has been examined in a variety of studies, creativity researchers have more recently demonstrated that beliefs regarding one's ability to be creative can be domain-specific. Reiter-Palmon, Robinson-Morrall, Kaufman, and Santo (2012) found differences in self-perceptions of creative ability across three domains: school, work, and hobby. In other words, having beliefs that one can be creative in a hobby does not necessarily translate into beliefs about an ability to be creative in a work setting, signifying that beliefs may differ as a function of domain. This finding suggests that when examining beliefs about creative ability, it is beneficial to look at domain-specific beliefs as well as a general belief about ability such as creative self-efficacy. If general beliefs about creative ability are examined in isolation, it

is quite possible that employees who believe in their ability to be creative at work may not indicate having high creative self-efficacy. This may be a result of employees utilizing their beliefs about creativity in domains outside of work to assess their thoughts about their creative ability.

In addition to individual factors that affect creativity, there are characteristics of the organization that may influence employee creativity. One area previous research has focused on is the effect of the work environment on creative behavior. For example, researchers have looked at goal setting, rewards, leadership, autonomy, and competition as organizational factors relating to employee creativity (Amabile, 1996; Shalley, 1991; Shalley, Gilson, & Blum, 2000; Shalley & Perry-Smith, 2001). One organizational factor that has received little attention is the idea of perceived requirements for creativity at work. Unsworth, Wall, and Carter (2005) shed light on creative requirements in the workplace by developing a theoretical definition of creative requirements as well as a measure for assessing perceptions of creative requirement. Creative requirement was defined as the perceptions of employees that creativity is expected in their workplace roles. The authors also argued for a connection between goal setting and creative requirements in the workplace, such that organizations that instill a creative requirement should have employees that perceive the need to generate creative output or to perform in a creative manner.

In addition to a theoretical justification for the effect of creative requirements on employee creativity, a few researchers have empirically examined creative requirements in the workplace. One study examined the relationship between employee perceptions of personal responsibility for initiating change in an organization and employee likelihood to take charge and to initiate the change (Wolfe Morrison & Phelps, 1999). The results of this study suggested that employees who perceived a personal responsibility to bring about change were more likely to initiate extra role behaviors to start the change process. Although felt responsibility is not perfectly aligned with perceptions of requirements for creativity, it is a variable that parallels well to perceptions of creative requirements. Furthermore, although initiating the change process is not creativity in general, it maps on well given that initiating the change process involves similar processes (e.g., thinking outside of the box).

In another study, Shalley et al. (2000) examined the relationship between organizational characteristics and job-required creativity. The results of this study suggested that proximal job factors (i.e., job autonomy, job complexity, and job demand), were more predictive of job requirements for creativity in the workplace than distal organizational factors (i.e., organizational support and organizational control). Although not looking directly at creative performance as an outcome, this study suggests that job factors do indeed affect requirements for creativity. In another assessment of organizational expectations and requirements for creativity, one study found that supervisor perceptions of innovation required in a particular role was positively related to follower creativity (Scott & Bruce, 1994).

Looking more specifically at perceived requirements and creative outcomes, one study demonstrated that performance expectations that included a creative component led employees to be more innovative while controlling for intrinsic interests and capabilities (Yuan & Woodman, 2010). Similarly, in the team setting, it has been found that teams that perceived tasks to require creativity while also experiencing task interdependence, shared team goals, client support for creativity, and valued participative problem solving were most creative (Gilson & Shalley, 2004). This suggests that, among other factors, perceptions of a requirement for creativity influence creativity even at the team level.

As demonstrated, researchers in the field of creativity often examined the individual factors that affect creativity (e.g., motivation) or organizational factors that affect creativity (e.g., organizational culture), but typically not in the same context or study. However, Woodman et al. (1993) argued that the interaction of the two components is what truly maximizes creativity; that is, both environmental factors and individual factors play a role in employee creativity. Woodman et al. argued that the interaction of the two factors should lead to the greatest creativity from employees. It has also been argued that taking a single perspective to understanding creativity in the workplace is an incomplete approach. It is the interaction among factors such as self-efficacy and perceptions of value for innovation that have the most impact on creative behavior (Yuan & Woodman, 2010). This suggests that, although exploring individual factors and organizational factors as unique predictors of creativity can provide useful information, it may be beneficial to explore the interaction of the two to identify factors that maximize employee creativity.

The purpose of the current study was to examine factors that may affect creativity in the workplace. More specifically, the current study examines the interaction between individual factors associated with creativity (i.e., self-perceptions of creativity at work and creative self-efficacy) and organizational factors associated with creativity (i.e., perceptions of requirements for creativity). In addition, this study evaluated both a more general measure of creative self-efficacy, as well as a measure specifically designed to evaluate self-perceptions of creativity at work to determine if there is any differences between general beliefs about creative ability and domain-specific beliefs. Although creative self-efficacy and self-perceptions of creativity have been correlated in one study (Reiter-Palmon et al., 2012), the current study assesses both beliefs to determine if there is a difference in the beliefs utilizing the current framework. This leads to the following hypotheses.

Hypothesis 1: The relationship between self-perceptions of creativity at work and creativity will be moderated by requirements for creativity at work.

Hypothesis 1a: The quality (i.e., usefulness) of solutions generated will be highest when problem solvers have high self-perceptions of creative ability at work (i.e., individual factor) and perceive a requirement for creativity in their work (i.e., organizational factor).

Hypothesis 1b: The originality (i.e., novelty) of solutions generated will be highest when problem solvers have high self-perceptions of creative ability at work (i.e., individual factor) and perceive a requirement for creativity in their work (i.e., organizational factor).

Hypothesis 2: The relationship between creative self-efficacy and creativity will be moderated by requirements for creativity at work.

Hypothesis 2a: The quality (i.e., usefulness) of solutions generated will be highest when problem solvers have high creative self-efficacy (i.e., individual factor) and perceive a requirement for creativity in their work (i.e., organizational factor).

Hypothesis 2b: The originality (i.e., novelty) of solutions generated will be highest when problem solvers have high creative self-efficacy (i.e., individual factor) and perceive a requirement for creativity in their work (i.e., organizational factor).

METHOD

PARTICIPANTS

A total of 548 students were recruited for participation in the study, including 344 students (62.8%) from a Western University and 204 students (37.2%) from a Midwestern University. Because the study focused on a work environment, only participants who worked at least 20 hours a week were recruited. Age ranged from 18 to 58, with a mean age of 22.94 years old ($SD=6.05$). Among the 548 participants, 447 were female (81.6%), 100 were male (18.3%), and one participant did not report gender (.1%).

In addition, 43 participants identified as African American (7.9%), 41 as Asian American (7.5%), 264 as Caucasian (48.2%), 149 as Hispanic (27.2%), 5 as Native American (.9%), 44 reported another race (8.0%), and 2 did not report a race (.3%). Finally, 118 participants reported being freshmen (21.5%), 69 reported being sophomores (12.6%), 165 reported being juniors (30.1%), 183 reported being seniors (33.4%), 2 reported being graduate students (.4%), and 11 reported other as their class status (2%).

PROCEDURE

At both universities, participants were recruited using an online system provided by the psychology department. Details of the study were displayed on the website, recruiting students to participate in exchange for extra credit in one of their psychology courses. Upon signing up for the study, students were given a link to the web-based questionnaire. Upon completion of the questionnaire, students were given extra credit to apply to one of their psychology courses.

MEASURES

Self-perceptions of creativity

A measure of self-perceptions of creativity at work was developed for this study. The scale assessed the degree to which a person believes that he or she has the ability to perform creatively in a work setting. First, the researchers examined items from the literature that were designed to assess supervisory evaluation of creativity. Specifically, 13 items from George and Zhou's (2001) supervisory evaluation of creativity items along with two items from Zhou and George (2001) were used as a starting point. Second, the researchers rephrased the items as self-perceptions as opposed to supervisory evaluation (e.g., *The employee is a good source of creative ideas was changed to I am a good source of creative ideas*). Finally, the items were edited to measure self-perceptions of creativity at work (e.g., *I am a good source of creative ideas at work*). All questions were presented using a five-point Likert-type scale ranging from *Strongly Disagree* to *Strongly Agree*. Scale reliability as measured by Cronbach's alpha was strong ($\alpha=.94$).

Requirements for creativity

To measure requirements for creativity in a work setting, a questionnaire was developed for this study. The measure was designed to assess the degree to which an individual perceives a need or requirement for creativity in a work setting. To create the measure, researchers first examined the literature for current scales. A total of five items were used from a scale developed by Unsworth et al. (2005). In addition, new items designed to measure the extent to which respondents perceived requirements for creativity in a work setting were created to improve scale reliability. The final scale contained 18 items (e.g., *My work requires me to think about problems in new and/or original ways*). All questions were presented using a five-point Likert-type scale ranging from *Strongly Disagree* to *Strongly Agree*. Scale reliability was assessed using Cronbach's alpha and was again at a strong level ($\alpha=.92$).

Creative self-efficacy

Creative self-efficacy was measured using Tierney and Farmer's (2002) Creative Self-Efficacy Scale (e.g., *I feel that I am good at generating novel ideas*). The scale included three items, and scale reliability using Cronbach's alpha and was at an acceptable level ($\alpha=.79$).

Creative problem solving

Participants were also asked to generate the most creative solution to a real-world, complex, and ill-defined problem. The problem was a work-related problem in which an employee experienced role conflict as a result of conflicting objectives at work and at school. Solutions were rated by three trained raters for quality and originality. Interrater agreement for the quality ratings ($r_{wg}=.90$; ICC=.88) and originality ratings ($r_{wg}=.83$; ICC=.88) was acceptable.

ANALYSES

To test for moderation, the guidelines by Aiken and West (1991) were followed. Four hierarchical regression analyses were conducted looking at the interactive effects of beliefs about creativity ability and perceptions of requirements for creativity on the quality and originality of solutions. Prior to conducting the analyses, the independent variable and moderators were transformed (i.e., centered) to reduce the effect of multicollinearity. Second, the variables were entered into the regression model as outlined by Aiken and West. In Step 1 of the analysis, the centered independent variable (i.e., requirements for creativity at work) and the centered moderator of interest (i.e., self-perceptions of creativity at work or creative self-efficacy) were entered. In Step 2 of the analysis, the interaction term (i.e., the centered independent variable multiplied by the centered moderator of choice) was entered. The analyses were repeated for each dependent variable (i.e., quality and originality), resulting in four different regression analyses. The change in R² and interaction regression weights was examined to determine if the interaction was significant and added significantly to the variance accounted for.

RESULTS

Prior to exploring the predictive analyses, descriptive statistics and correlations were calculated (see Table 1). The correlation analyses indicated that there was a significant and positive relationship between creative self-efficacy and creative self-perceptions at work ($r=.44$). However, this correlation indicates that the constructs are sufficiently distinct. In addition, creative self-efficacy and perceptions of requirements for creativity at work ($r=.13$), and creative self-efficacy and originality of solutions generated ($r=.15$) were statistically significant but weak. In addition, there was a significant, positive relationship between creative self-perceptions at work and perceptions of requirements for creativity at work ($r=.45$). However, self-perceptions of creativity at work did not significantly relate to either the quality or originality of solutions generated.

To explore the relationships between the key variables further, a regression analysis was conducted to examine the interacting effects of requirements for creativity at work and self-perceptions of creative ability at work on the quality of solutions generated to a work-related problem (see Table 2). The change in R² from Model 1 containing the predictors alone to Model 2 containing the interaction was significant ($R^2\Delta=.01$, $p=.03$). There was a significant interaction between requirements for creativity at work and self-perceptions of creative ability at work as a predictor of quality of solutions generated to a work-related problem. Specifically, problem solvers generated solutions to a work-related problem of highest quality when they felt they had the ability to be creative in a work setting and perceived high requirements for creativity at work (see Figure 1).

TABLE 1. Descriptive statistics and correlations for all variables

	Descriptives		Correlations				
	Mean	SD	1.	2.	3.	4.	5.
1. Creative self-efficacy	4.96	1.00	1.00	0.44*	0.13*	.04	.15*
2. Creative self-perceptions	3.66	.60		1.00	.45*	-.01	-.01
3. Requirements for creativity	2.95	.63			1.00	.06	.08
4. Quality of solutions	2.49	.71				1.00	.37*
5. Originality of solutions	2.77	.96					1.00

*Significant at the $p < .05$ level.

TABLE 2. Hierarchical multiple regression analyses predicting quality of solutions from self-perceptions of creative ability and perceptions of requirements for creativity

Predictor	Model Statistics				
	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Step 1					
Requirements for creativity	.46	.23	.30	2.02	.04
Self-perceptions of creative ability	.40	.19	.35	2.15	.03
Step 2					
Requirements \times Self-perceptions	-.12	.06	-.57	-2.17	.03

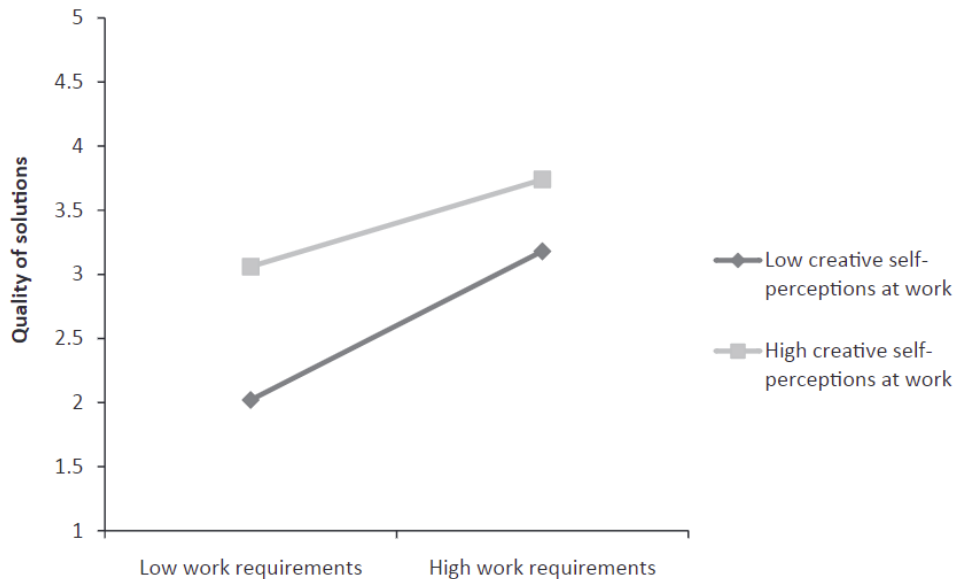


FIGURE 1. Interaction between creative self-perceptions at work and requirements for creativity at work on quality of solutions generated to a work-related problem.

A second regression analysis was conducted to examine the interaction between requirements for creativity at work and self-perceptions of creative ability at work on the originality of solutions generated to a work-related problem (see Table 3). The change in R^2 from Model 1 containing the predictors alone to Model 2 containing the interaction was marginally significant ($R^2\Delta=.01, p=.06$). There was a marginally statistically significant interaction between self-perceptions of creative ability at work and requirements for creativity at work as a predictor of originality of solutions generated to a work-related problem. More specifically, problem solvers generated solutions to a work-related problem of highest originality when they felt that they had the ability to be creative in a work setting and perceived high requirements for creativity at work (see Figure 2).

To explore whether or not domain-specific beliefs about creative ability differed from general beliefs, a second set of analyses were conducted. More specifically, the role of a general belief about one's creative ability (i.e., creative self-efficacy) in the relationship between requirements for creativity at work and creativity of solutions to a work-related problem was examined. The first analysis indicated that the change in R^2 from Model 1 containing requirements for creativity at work and creative self-efficacy to Model 2 containing the interaction was marginally significant ($R^2\Delta=.01, p=.06$) (see Table 4). There was a marginally significant interaction between creative self-efficacy and requirements for creativity at work. In other words, quality of solutions to a work-related problem was highest when problem solvers had high creative self-efficacy and perceived high requirements for creativity at work (see Figure 3).

TABLE 3. Hierarchical multiple regression analyses predicting originality of solutions from self-perceptions of creative ability and perceptions of requirements for creativity

Predictor	Model Statistics				
	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Step 1					
Requirements for creativity	.58	.31	.28	1.89	.06
Self-perceptions of creative ability	.45	.25	.29	1.80	.07
Step 2					
Requirements \times Self-perceptions	-.14	.08	-.49	-1.89	.06

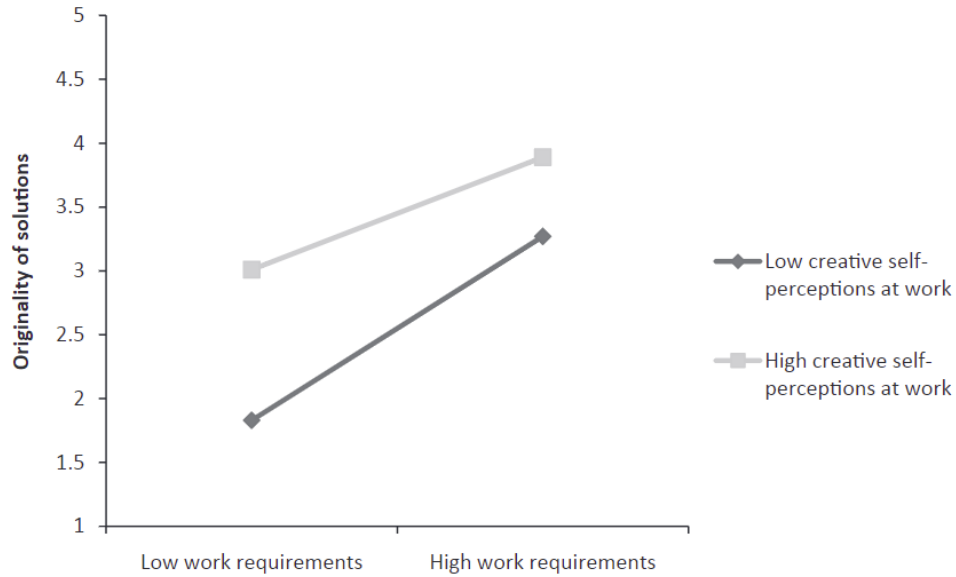


FIGURE 2. Interaction between creative self-perceptions at work and requirements for creativity at work on originality of solutions generated to a work-related problem.

TABLE 4. Hierarchical multiple regression analyses predicting quality of solutions from creative self-efficacy and perceptions of requirements for creativity

Predictor	Model statistics				
	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Step 1					
Requirements for creativity	.52	.29	.34	1.79	.08
Creative self-efficacy	.37	.19	.52	1.99	.05
Step 2					
Requirements \times Creative self-efficacy	-.10	.06	-.67	-1.87	.06

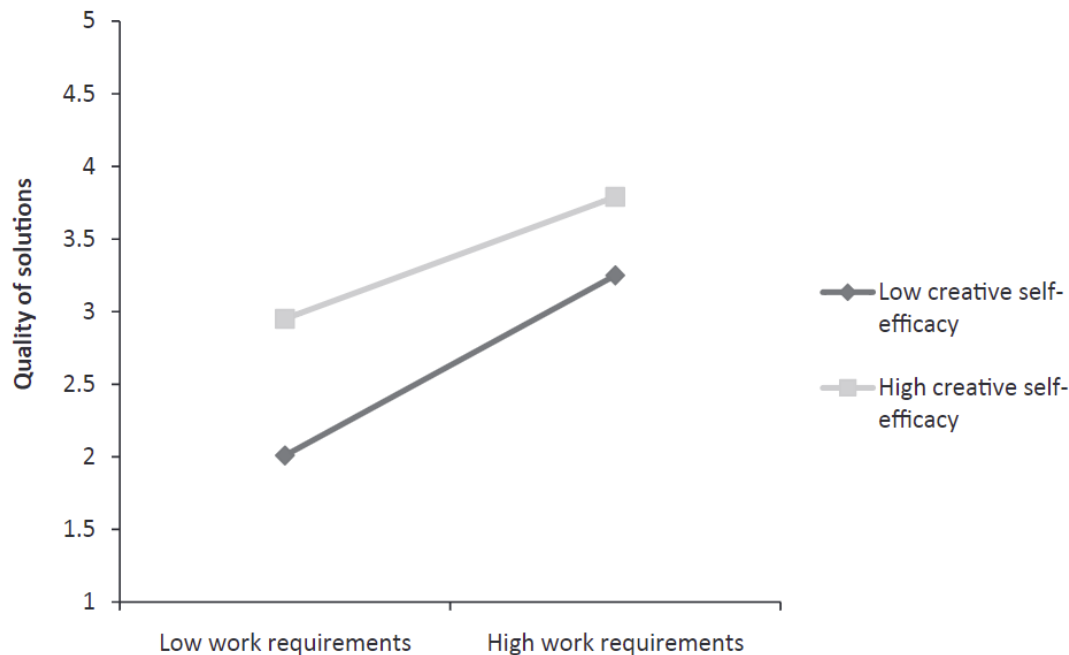


FIGURE 3. Interaction between creative self-efficacy and requirements for creativity at work on quality of solutions generated to a work-related problem.

Finally, a regression analysis was conducted to examine the interacting requirements for creativity at work creative self-efficacy on the originality of solutions generated to a work-related problem (see Table 5). The change in R^2 from Model 1 containing the predictors alone to Model 2 containing the interaction was significant ($R^2\Delta=.01, p=.03$). There was a statistically significant interaction between creative self-efficacy and requirements for creativity at work as a predictor of originality of solutions generated to a work-related problem. More specifically, problem solvers generated solutions to a work-related problem of highest originality when they had high creative self-efficacy and perceived high requirements for creativity at work (see Figure 4).

The findings suggest that creative performance on a work-related problem was dependent on the problem solver's belief that he/she could perform creatively in a work setting (or creative self-efficacy) and on the requirements for creativity in his or her work setting. It is important to note that it was the interactive effect of the requirements for creativity at work and the belief that one can be creative that accounted for a significant amount of variance in the quality and originality of solutions.

TABLE 5. Hierarchical multiple regression analyses predicting originality of solutions from creative self-efficacy and perceptions of requirements for creativity

Predictor	Model statistics				
	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Step 1					
Requirements for creativity	.80	.39	.39	2.07	.04
Creative self-efficacy	.69	.25	.72	2.78	.00
Step 2					
Requirements \times Creative self-efficacy	-.16	.07	-.79	-2.23	.03

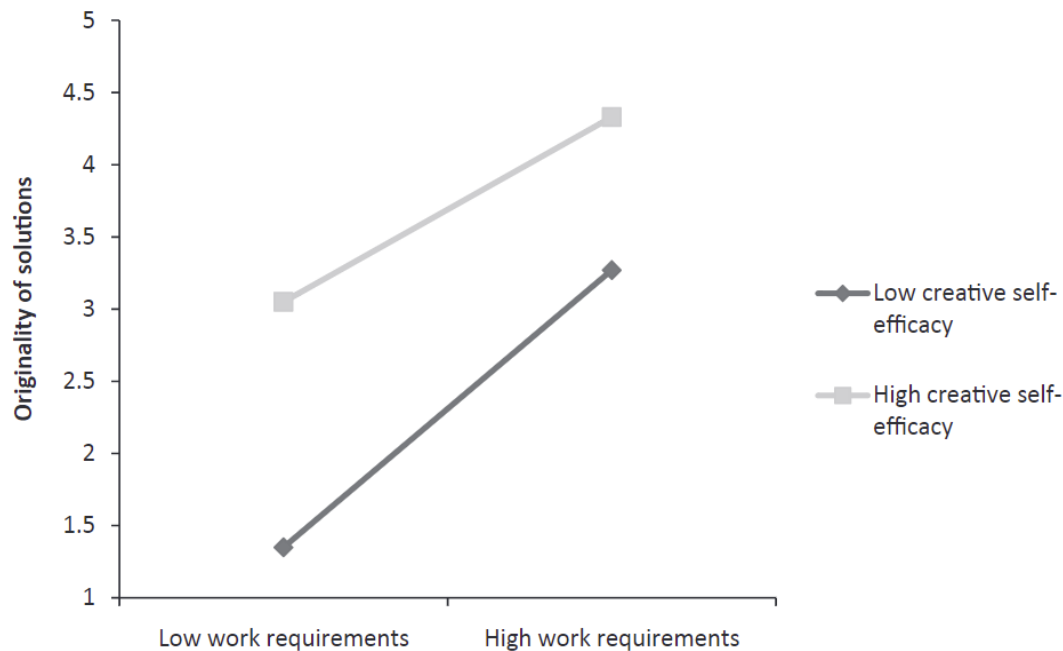


FIGURE 4. Interaction between creative self-efficacy and requirements for creativity at work on originality of solutions generated to a work-related problem.

Interestingly, the slopes of the lines for those low on self-perceptions of creative ability at work and creative self-efficacy were greater than those high on both constructs. This suggests that in a situation in which a problem solver lacks the belief that he or she can perform creatively in general or in a work setting, having the perception of requirements for creativity at work can in fact boost creativity more so than for individuals who perceive themselves as creative.

DISCUSSION

The purpose of the current study was to examine the role of requirements for creativity in a work setting and beliefs about one's creative ability in the creativity of solutions generated to a real-world problem. The results suggested that solution quality and originality are highest when the problem solver has requirements for creativity at work and has the belief that he or she can be creative in a work setting and in general. Most importantly, the interaction between the belief that one can be creative and perceptions of requirements for creativity was predictive of performance.

Taken together, it can be argued that it is important not only to translate requirements of creativity to employees at work, but also that the employee should have positive beliefs regarding their creative ability at work and in general. However, having the belief in one's ability to be creative is not required for creativity at work. The results also suggested that, regardless of having low beliefs about creative ability, problem solvers can still perform creatively in a work setting if they perceive a high requirement for creativity in the organization. Furthermore, judging by the steeper slopes for low beliefs about creative ability, it can be argued that in the absence of an individual factor (i.e., beliefs about creative ability) contributing to creativity, organizational factors (i.e., creative requirement) are even more important. However, when an individual believes that he or she can be creative, the organizational component of creative requirements can help boost creativity to an even higher level.

The current study contributes to creativity theory by addressing several issues relating to the predictors of creativity. First, researchers should continue to look at the role of self-perceptions of creativity in specific domains as well as creative self-efficacy. While in this study, both show similar patterns of relationship with creative problem solving, this may not always be the case (Reiter-Palmon et al., 2012). Evaluating self-perception of creativity in a specific domain may allow researchers to identify relationships that were hidden as a result of collapsing beliefs about creativity across domains. Second, this study contributes to a topic that has only been studied in a limited fashion, namely requirements for creativity. Specifically, this research provides additional support to previous findings on the importance of requirements for creativity in creative performance (Unsworth et al., 2005). Finally, this study contributes to our understanding of the interaction between organizational factors (i.e., requirements for creativity) and individual factors (i.e., self-perceptions or self-efficacy) as suggested by Woodman et al. (1993).

From an applied perspective, this research has some important implications. Managers wanting to foster creativity in an employee should be attending to a variety of factors. First, the level of the employee's belief about his or her ability to perform creatively at work is important. Because self-perceptions regarding creative ability have been shown to be domain-specific (Reiter-Palmon et al., 2012), managers should be looking at employees' beliefs about their ability to be creative in a work setting, not necessarily across all domains (e.g., hobby, school). In fact, it may be easier to change or develop positive self-perceptions of creativity in a specific domain than the general

evaluation of creative self-efficacy. In addition, managers should focus on providing requirements for creativity in the workplace. More specifically, it should be clear to the employee that creativity is desired by the organization. This allows employees to tap into their creative resources and perform creatively. However, managers will need to find that delicate balance of requesting creativity from employees without demanding it. Research has suggested that pressuring employees to perform creatively can be detrimental to creative performance (Kelly & Karu, 1993; Mumford, Scott, Gaddis, & Strange, 2002; Redmond, Mumford, & Teach, 1993; Wallace, 1991). The delicate balance can be achieved by encouraging employees to perform creatively, removing barriers for creativity, encouraging and accepting risk-taking, and providing time for creative thoughts to flourish.

One limitation of the current study is that it explores the role of self-perceptions of creativity and requirements for creativity in one domain (i.e., work). Future research should continue to look at the role of requirements for creativity in specific domains as potential motivators for creative behavior. For example, if a problem solver perceives the need to be creative at school and believes that he or she can be creative in school, does this translate to the work environment? In other words, are the effects of requirements for creativity domain-specific (similar to that of self-perceptions of creativity)? Another limitation of the current study is that only one problem type was used (a work-related problem). Future researchers should examine whether requirements for creativity at work (or other domains) and self-perceptions of creativity at work (or other domains) are predictive of creative performance measured differently (e.g., supervisor ratings, school-related problems, divergent thinking tasks, idea evaluation tasks, etc.). Furthermore, although the creative problem solving task was work-related and participants were working, it did not actually take place in the workplace. Finally, in this study, all predictors were evaluated using self-report measures. While common method bias may be of concern, it is important to remember that the criterion was evaluated by trained raters and, therefore, reducing this concern.

In summary, managers desiring creativity should look for employees who believe that they can be creative at work. However, managers must take this one step further and ensure that the employee knows that creativity is desired. Managers should also be aware that although having a belief that one can be creative at work is important, it is not absolutely crucial for creative performance. The degree to which creativity increased for those low on self-perceptions of creativity was greater than those high on self-perceptions of creativity (and creative self-efficacy), indicating that knowing that creativity is desired in an organization can combat issues regarding low self-perceptions of creative ability.

REFERENCES

- Aiken, L.S., & West, S.G. (1991) Multiple regression: Testing and interpreting interactions. Newbury Park, CA: Sage.
- Amabile, T.M. (1996) Creativity in context: Update to "The Social Psychology of Creativity". Boulder, CO: Westview Press.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*,84,191–215.
- Bandura, A. (1986) Social foundations of thought and action: A social-cognitive view. Englewood Cliffs, NJ: Prentice-Hall.
- Basadur, M., Runco, M.A., & Vega, L.A. (2000). Understanding how creative thinking skills, attitudes and behaviors work together: A causal process model. *Journal of Creative Behavior*,34,77–100.
- Beghetto, R.A. (2006). Creative self-efficacy: Correlates in middle and secondary students. *Creativity Research Journal*,18, 447–457.
- Carmeli, A., & Schaubroeck, J. (2007). The influence of leaders' and other referents; normative expectations on individual involvement in creative work. *The Leadership Quarterly*,18,35–48.
- George, J. (2007). Creativity in organizations. *Academy of Management Annals*,1, 439–477.
- George, J., & Zhou, J. (2001). When openness to experience and conscientiousness are related to creative behavior: An interactional approach. *Journal of Applied Psychology*,86, 513–524.
- Gilson, L.L., & Shalley, C.E. (2004). A little creativity goes a long way: An explanation of teams' engagement in creative processes. *Journal of Management*,30, 453–470.
- Gong, Y., Huang, J., & Farh, J. (2009). Employee learning orientation, transformational leadership, and employee creativity: The mediating role of creative self-efficacy. *Academy of Management Journal*,52,765–778.
- Jaussi, K.S., Randel, A.E., & Dionne, S.D. (2007). I am, I think I can, and I do: The role of personal identity, self-efficacy, and cross-application of experiences in creativity at work. *Creativity Research Journal*,19,247–258.
- Judge, T., Erez, A., & Bono, J. (1998). The power of being positive: The relation between positive self-concept and job performance. *Human Performance*,11, 167–187.
- Kelly, J.R., & Karu, S.P. (1993). Entrainment of creativity in small groups. *Small Group Research*,24,178–198.

- Mumford, M.D., Scott, G.M., Gaddis, B., & Strange, J.M. (2002). Leading creative people: Orchestrating expertise and relationships. *Leadership Quarterly*,13, 705–750.
- Redmond, M.R., Mumford, M.D., & Teach, R. (1993). Putting creativity to work: Effects of leader behavior on subordinate creativity. *Organizational Behavior and Human Decision Processes*,55, 120–151.
- Reiter-Palmon, R., Robinson-Morrall, E. J., Kaufman, J. C., & Santo, J. B. (2012). Evaluation of self-perceptions of creativity: Is it a useful criterion. *Creativity Research Journal*,24, 107–114.
- Scott, S.G., & Bruce, R.A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal*,37, 580–607.
- Shalley, C.E. (1991). Effects of productivity goals, creativity goals, and personal discretion on individual creativity. *Journal of Applied Psychology*,76, 179–185.
- Shalley, C.E., Gilson, L.L., & Blum, T.C. (2000). Matching creativity requirements and the work environment: Effects on satisfaction and intentions to leave. *Academy of Management Journal*,43, 215–223.
- Shalley, C.E., & Perry-Smith, J.E. (2001). Effects of social psychological factors on creative performance: The role of information and controlling expected evaluation and modeling experience. *Organizational Behavior and Human Decision Processes*,84,1–22.
- Shalley, C., & Zhou, J. (2008). Organizational creativity research: A historical overview. In J. Zhou, & C. Shalley (Eds.),*Handbook of organizational creativity*(pp. 3–32). New York, NY: Taylor & Francis Group, LLC.
- Shin, S.J., & Zhou, J. (2007). When is educational specialization heterogeneity related to creativity in research and development teams? Transformational leadership as a moderator *Journal of Applied Psychology*,92,1709–1721.
- Tierney, P., & Farmer, S. (2002). Creative self-efficacy: Its potential antecedents and relationship to creative performance. *Academy of Management Journal*,45, 1137–1148.
- Tierney, P., & Farmer, S.M. (2004). The Pygmalion process and employee creativity. *Journal of Management*,30, 413–432. Tierney, P., & Farmer, S.M. (2011). Creative self-efficacy development and creative performance over time. *Journal of Applied Psychology*,96, 277–293.
- Unsworth, K.L., Wall, T.D., & Carter, A. (2005). Creative requirement: A neglected construct in the study of employee creativity. *Group and Organization Management*,30, 541–560.

- Wallace, D.B. (1991). The genesis and micro-genesis of sudden insight in the creation of literature. *Creativity Research Journal*,4,41–50.
- Ward, T.B., Smith, S.M., & Finke, R.A. (1999). Creative cognition. In R.J. Sternberg (Ed.), *Handbook of creativity* (pp. 189–212). New York: Cambridge University Press.
- Wolfe Morrison, E.W., & Phelps, C.C. (1999). Taking charge at work: Extra role efforts to initiate workplace change. *Academy of Management Journal*,42, 403–419.
- Woodman, R.W., Sawyer, J.E., & Griffin, R.W. (1993). Toward a theory of organizational creativity. *Academy of Management Review*,18, 293–321.
- Yuan, F., & Woodman, R.W. (2010). Innovative behavior in the workplace: The role of performance and image outcome expectations. *Academy of Management Journal*,53, 323–342.
- Zhou, J., & George, J. (2001). When job dissatisfaction leads to creativity: Encouraging the expression of voice. *Academy of Management Journal*,44, 682–696.