Energizing An Academic Department Through Promoting Creativity

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ABSTRACT

C *reativity is a sine qua non for organizational survival. Organizations such as universities have a tacit agreement of the need for creativity in academic environments. However, the implementation of creativity is hindered by neither formal encouragement and policies nor actualization of its benefits and incentives. The purpose of this study is to consider the extent of the possible constructs of fostering creativity in an academic department. It is suggested that motivation, creative thinking, creativity goals and team setting, transformational leadership, and institutional support are imperative components to foster creativity in academia. Further implications and research are discussed.*

Keywords: *Academic department, organizational development, creativity, innovation*

Introduction

With increasing global competition and turbulent environment, creativity is a sine qua non for organizational survival (Amabile, 1997; Cummings & Oldham, 1997; Shipton, Fay, West, Patterson, & Birdi, 2005). Specifically, a strong linkage between climate and creative endeavor is contingent on the essentials of innovation for an aggressive business jungle, especially in a tempestuous environment with pressures of competition and production (Hunter, Bedell, & Mumford, 2007; Oldham & Cummings, 1996). Organizations such as universities have a tacit agreement on the need for creativity in academic environments. However, the implementation of creativity is hindered by neither formal encouragement and policies nor actualization of its benefits and incentives. Regarding those limits, in fact, the potential benefits of developing creativity in a university department is grounded in its capacity to compete for financial resources, people, reputation, and potential students (Heaton, 2005).

On the one hand, the acknowledgement of creativity usually comes from scholarly journals, research grants or innovative educational programs. On the other hand, administrative effort and administrative or financial innovation are usually viewed as service. Accordingly the narrow university assessment of academic achievement could fail to notice real organizational change, which in turn devalues the contributions of those creative manifestations of management and leadership (Heaton, 2005). Most important, in order to maximize creativity, Amabile (1998) argued that "encouragement from supervisors certainly fosters creativity, but creativity is truly enhanced when the entire organization supports it. Such support is the job of an organization's leaders, who... make it clear that creative efforts are a top priority" (p. 84). That is, it is necessary to take some action plans to change the culture of institutions, thereby benefiting the stakeholders for the common good.

The aim of this article is to consider the extent of a possible construct of fostering creativity in the academic department. First, the definition of creativity is considered. Then, based on creativity literature in the organization, three prominent theoretical models are reviewed. Third, drawing upon organizational literature, the model of promoting creativity in an academic department is presented, with the goal of energizing that department. Finally, based on the suggestion of this model, further implications and research are discussed.

The Characteristics of Creativity

In early times, creativity was not always appreciated but was viewed as mystery. Creative action was the visitation of the Muse or the divine force and creative geniuses were serendipitously inspired by divine intervention (Dimock, 1986; Haring-Smith, 2006; Simonton, 2006). In this light, human beings cannot create but only mimic the glory of God or are inspired by the Muses (Ludwig, 1992; Niu & Sternberg, 2003; Simonton, 2000). The notion of creativity under the umbrella of the divine entity was dominant in the history of Western mindset for a long period of time. After Enlightenment, the concept of creativity had shifted from divine to individual, followed by achievements of science and technology (Craft, Gardner, & Claxton, 2008; Niu & Sternberg, 2006). In the contemporary Western view, the general consensus on creativity is defined as the individuals (creators), processes (creating), and products (creations) with the features of usefulness, appropriateness, and novelty (Amabile, 1996; Csikszentmihalyi, 1996; Gardner, 1993; Taylor,

1988). This definition of creativity is also associate with four potential research paradigms: the creative person, the cognitive processes of creativity, environmental issues to shape or inhibit creativity, and the product of creative performance (Batey & Furnham, 2006).

Three Conceptual Models of Creativity in the Organization

The first model was developed by Amabile (1997) in *The Componential Theory of Organizational Creativity and Innovation*. She extended the early model, *The Componential Theory of Individual Creativity* (for detailed information, see Amabile, 1996) and applied it to the work environment. She argued that three key elements (organizational motivation, resources, and management practices) will impact individuals' creativity, which also includes three key elements (expertise, task motivation, and creativity skills). Further, individual and team levels of creativity function as an important foundation of organizational creativity and innovation. Specifically, the most influential component in this model is motivation. Support from the highest levels of management is necessary to successfully exercise innovation. She also identified several contributors of this development, including the value of creativity and innovation, reward and recognition of creative outputs, and a risk-taking attitude toward work. Sufficient time and funds are imperative resources for facilitating creativity development in the system. Finally, in order to maximize creativity and innovation, communicating and interpreting the vision are other important lessons for the manager to practice.

The second model, *An Interactionist Model of Organizational Creativity*, was proposed by Woodman, Sawyer, and Griffin (1993). This comprehensive framework has great promise for explaining the complex mosaic of three levels (individual, group, and organization) of creativity behavior shaped by various potential variables. At the first level, individual creative output is determined by antecedent conditions (e.g., biographical factors), cognitive ability (e.g., divergent thinking), disposition (e.g., self-esteem), knowledge, motivation, social influences (e.g., rewards), and contextual influences (e.g., physical environment). At the group level, it involves the interaction of the group members, group process, and contextual influences. Finally, organizational creativity is affected by its component groups and contextual factors (e.g., culture and resource). Taken together, individual, group, and organizational attributes facilitate the creative process and situation, which in turn lead to useful creative products and services. The key feature of this model is its utility to capture leverage across levels of analysis, which specifically identifies the group and organizational attributes that either facilitate or inhibit creative action in complicated social systems.

Ford (1996) provided another model of creativity *A Theory of Creative Action Taking in Multiple Social Domains*. He followed the line of Csikszentmihalyi (1988) who proposed three components of contributing creative actions: the individual, the field, and the domain. Fields and domains render the context in which people act. The interaction among people, field, and domain is as ongoing cyclical process. The main idea of Ford's model is that creative actions are influenced by social domains and are selected by the fields. This simultaneous interaction between domains and fields impacts creative actions in organizational settings. Domains include four components: markets, institutional environments, organizations, and groups; Fields also contain four elements: consumers, professional specialists, socialized organizational actors, and work members. As this model suggested, the interaction between creative actions and multiple domains are mediated by respective fields. Through different levels of analysis, in terms of creative actions Ford argued that

"perhaps the most important interaction is between fields' selection processes and individuals' receptively beliefs" (pp. 1133-1134). He concluded the challenges of organizational creativity are to legitimate individual manifestation of creativity and to take advantage of selection procedures from multiple domains.

Toward a Model of Development of Creativity in an Academic Department

Motivation

A large body of research denoted that motivation plays a key role in creativity development (Amabile, 1996; Hennessey, 2003; Oldham & Cummings, 1996). There are two kinds of motivation: intrinsic and extrinsic, the former being far more essential for creativity. In fact, "intrinsic motivation is a primary driving force behind the creative process" (Hennessey, 2003, p. 266). However, "creative work calls for both intrinsic and extrinsic motivation operating in a synergistic fashion" (Mumford, 2000, p. 324). Research showed extrinsic motivators (e.g., reward, recognition, and feedback) may increase some aspects of creative performance (Amabile, 1997). In addition, Ford (1996) claimed "the concept of intrinsic motivation [also] confounds the influence of goal content, expectations, and emotions" (p. 1134).

Receptivity beliefs imposed by organizational settings are also a catalyst for creative actions. A positive history of success could reinforce the likelihood of creative endeavors, vis-a-vis previous negative experiences. To some extent it is related to capability beliefs or self-efficacy. The strong image of positive capability confidence is very favorable for people's creativity (Ford, 1996). According to Shalley's (1995) review of the literature, it suggested that expected evaluation may have dysfunctional consequences on creativity through a detrimental effect on intrinsic motivation and negatively affecting cognitive activities. The possible reason is that an individual's evaluation could force people to focus on extrinsic factors, and therefore away from the task *per se*. Most important, this result may lead to shun risk-taking and exploring the horizon of possibilities, which is a key component of creativity. The following are possible propositions:

P1a. Management should develop a learning orientation that motivates faculties to advance creative self-efficacy to engage in creative activities. Taken together, the feelings of enhanced capacities or competencies are likely to heighten creative effects.

P1b. Institutions can reap the benefits of faculty's creativity by the operation of careful use of a reward and evaluation system, providing ample opportunities for free play with tasks, making intrinsic motivation as a conscious factor and focus on the intrinsically enjoyable aspects of activities.

Creative Thinking

People's ideas and their creative efforts intertwine with the environment surrounding them. Consequently, in organizational settings it is necessary to structure a learning environment that is conducive to creative thinking skills and presentation of information to promote creative thoughts (Mumford, 1995). Shipton et al (2005) contended that for the sake of organizational innovation, the predominant strategy should focus on exploration instead of exploitation. This exploratory learning will trigger three phases of an organizational learning cycle: the creation, transfer, and implementation of knowledge (p. 119).

Amabile (1997), additionally, pointed out that a cognitive style (e.g, favorable to a heuristic approach) and working style are important for creative thinking skills. Creative ideas easily emerge when individuals explore new cognitive pathways and are playful with ideas (Oldham & Cummings, 1996). Divergent thinking and associational skills are one of the most frequently cited in literature on creative abilities. The assessment of divergent thinking is to examine the possible solutions for an open-ended problem. The technique of associational abilities is using analogies and metaphors to discover unusual relationships (Ford, 1996).

A common type of creativity is creative problem solving which is more accessible and applicable in organizational environments (DiLiello & Houghton, 2006). Process models of creative problem solving have some core operations: problem identification, collecting data, filtering information, conceptual combination, generating thought, idea appraisal, and implementation (Baughman & Mumford, 1995; Scott, Leritz, Mumford, 2004). Additionally, Sternberg (2003, 2005) provided some suggestions for creative thinking: redefine problems, analyze solutions, defy the crowd, take risks, open minds, tolerate uncertainty, and be patient. The following are possible propositions:

P2a. The occurrence of creativity is not spontaneous and random but a synergy of related knowledge and skills drawing from the reservoir of individuals' creativity potential. Therefore, management should develop the ability to identify the creative potential in faculties and staffs, to recognize creative outcomes, and to encourage cognitive processes related to creativity.

P2b. For the sake of development of creativity in the department, management should utilize creativity-fostering strategies in related meetings or activities, including a set of skills: pattern recognition, connectivity to diversity, synthesis training, a schema of problem solving and divergent thinking exercises.

Creativity Goal and Team Setting

A person's motivation for pursuing creativity is moderated by relevant expectations, emotions, and goals. Behavior episodes related to creativity are elicited from intentional or attentional goals (Ford, 1996). Shalley (1995) found individuals in the condition of having a creativity goal, absence of co-actors, and the expectation of evaluation will orchestrate the highest level of creativity in organizations. Specifically, "a creativity goal appears to motivate individuals to direct their attention and effort toward producing novel and appropriate responses.... Goal setting can be an effective mechanism for enhancing performance as long as goals are set for all desired performance dimensions" (p. 499). Additionally, based on goal-setting theory, Unsworth, Wall, and Carter (2005) suggested that increments of creative requirements in job descriptions will contribute to enhancement of creativity. With respect to goals and rewards in creative efforts, Mumford (2000) provided three perspectives for tackling that issue: (1) focus on performance objectives with regard to creative elements of the job, (2) evaluate progress rather than outcomes, thereby avoiding the block of creative flow, and (3) capitalize on a mix of rewards on the basis of progress with objectives.

The benefits of group setting are to provide an arena where members could enlarge their knowledge through others' contributions. Further, group diversity, leadership, and group cohesiveness also influence group creative action (Amabile, Conti, Coon, Lazenby, & Herron, 1996;

Woodman et al., 1993). Following this line, it is likely that the strength of group activity will be influenced by the gestalt of all members' creativity inputs. Amabile (1998) and Ford (1996) suggested the feature of group interaction for producing creative ideas is richer because of heterogeneous perspectives and backgrounds. Furthermore, "the chemistry of a work team which encourages innovative approaches with an eye to the immovable limits of the organization is a vital part of getting 'out of the box' " (p. 402).

Most often the creative enterprise happens in a team setting; thus, the role of the leader has a tendency to markedly impact creative efforts. In light of the nature of creative work, which is ambiguous, risky, and subject to criticism, supportive supervision appears to have contributions to creativity (Mumford, 2000). Hirst, van Knippenberg, and Zhou (2009) suggested the use of a combination of individual inclination and team learning in order to invite the stronger association with creativity. Based on their findings, a cross-level analysis in person-in-situation interplay corroborated the hypothesis that team learning behavior provokes and catalyzes individual learning and in turn affects creativity. That is, the team context for learning has moderating effects on creative performance. The following are possible propositions:

P3a. Set up feasible creative goals to buffer faculties from extraneous demands and disturbing motivation. Tailor creative objectives to creative input because of reinforcement of expectations contributing to the creative output.

P3b. Team up faculties with diverse perspectives for collaborative creative outcomes, and legitimate creativity-related goals. Build positive communication, creativity-facilitating receptivity, and competency beliefs.

Implementation of Transformational Leadership

With regard to interventions on creativity, attempts should be made to develop the effectiveness of leadership skills (Mumford, 2000). The upper-management leadership plays an important role in fostering creative problem solving and this attitude will reinforce the employees to think outside the box (Cangemi & Miller, 2007). Cangemi and Miller (2007) stated that the main reason individuals reluctantly express creative ideas is because the "ideas are disregarded, devalued, taken by management with no recognition to the originator, or used to increase baseline work expectations for the hourly work force"(p. 402). Consequently, leaders should take an active role in formulating an approach in relation to the nature of creative individuals and creative enterprise (Mumford, 2000).

Bass (1985) conceptualized transformational leadership with four components: intellectual stimulation, individualized consideration, charisma, and inspirational motivation. As a result, by this mechanism, it is reasonable to believe transformational leadership is associated with followers' creativity. A number of studies confirmed that transformational leadership has a positive tendency toward enhancing creativity in either individual level or group conditions (Gong, Huang, & Farh, 2009; Jung, 2000; Shin & Zhou, 2003; Sosik, Kahai, & Avolio, 1998; Ui Haq et al., 2010). In line with the passion shared by leaders and followers, a transformational leader has the privilege of affecting subordinates' intrinsic motivation (Jung, 2000), which is evidenced as one of the key ingredients of creativity (Amabile, 1998). Intellectual stimulation is likely to encourage creativity by setting the expectation and role models for followers. Furthermore, individual consideration will

expand the reservoir of knowledge by including others' ideas and views, and in turn could catalyze the process of idea generation (Gong et al., 2009; Sosik et al., 1998).

One of the significant advantages of exerting a philosophy of transformational leadership is the outperformance of followers, which is partly on account of their commitment, intrinsic motivation, or the sense of vision that prompts them to surpass expectations (Howell & Avolio, 1993). In addition, a number of strategies leaders might employ is to construct the infrastructure needed to support creative work; for example, offer adequate resources to access, operate innovation audits, or practice performance politics (Mumford, 2000). Most important, "when the basic emotional needs of employees are understood by their leaders... the verbalization and commitment to writing the psychological contracts of both parties seems to offer a strong, solid foundation in the workplace for the development of an emotional climate conducive to generating creative, 'out-of-the-box' thought and action"(Cangemi & Miller, 2007, p. 409). The following are possible propositions:

> P4a. Management should take advantage of the concept of transformational leadership through encouragement, emotional support, confidence, and consideration to maintain and form creative actions of staffs.

> P4b. The commitment of transformational leadership in staffs' activities shapes their intentions to engage in creative work processes, through mutual trust, coaching, guiding, and inspiring, which ultimately produces high quality creative products.

Institutional Support

The literature evidence reviewed by Hunter et al. (2007) demonstrated that climate appraisals can be indices of creative achievement in reality; "climate is, in fact, strongly related to creative achievement across a number of context and criteria" (p.85). The importance of identification of complex environmental factors that amplify or stifle employees' creative behaviors is a likelihood of facilitating the structure of organizational environments conducive to creativity (Shalley, 1995).

Additionally, Oldham and Cummings (1996) suggested that in organizational settings, the increasing effects of creativity at work will be warranted through consideration of individual and contextual factors to management with appropriate strategies. Therefore, several variables had been identified as important catalysts for organizational encouragement of creativity: (1) the first is a positive attitude of risk-taking and empowerment of creativity and innovation (Amabile, 1997; Unsworth et al., 2005); (2) supportive and non-controlling supervision (Cummings & Oldham, 1997; Oldham & Cummings, 1996); (3) reward and adequate resources for creativity development (Mumford, 1995; Umiker, 1988); (4) participative management and decision-making (Amabile et al., 1996).

When supervisors are supportive of creativity, they will create a comfort zone where employees are willing to voice concerns, to try something new, to dedicate self-determination toward creativity direction, and ultimately to contribute more creative outcomes (Cummings & Oldham, 1997). At the organizational level, Amabile (1997) and her colleagues (1996) identified potential killers of creativity, including political issues and turf battles, pernicious criticism, competition within different departments, tight control by upper management, and rigid structures and procedures. By avoiding those pitfalls, Amabile (1997) clearly stated "organizations must

demonstrate a strong orientation toward [creativity and] innovation, which is clearly communicated and enacted, from the highest levels of management, throughout the organization" (p. 55). In academia, Ekvall and Ryhammar (1999) found organizational climate (behavior, attitudes, and feelings) and available resources are two important contributions to creative manifestation in an academic setting. Further, leadership serves as a moderating role between climate and creative achievements. The following are possible propositions:

P5a. Management should build a psychological safe zone that encourages autonomy, freedom, creativity, risk-taking, and a breaking-out-of-the-box attitude in order to maximize creative accomplishments.

P5b. Provide constructive and friendly feedback as a strong support for faculties and staffs, thereby showing appreciation and prizing their creative performances.

P5c. In order to maximize the outputs of institutional creativity, place individuals with creative potential in a creativity-nurturing context.

Conclusions and Implications for Future Directions

Creativity often requires that management change the mindset, even make a conscious culture change. But it is possible and the rewards could be fruitful. On the country, if an organization loses its creative power, the chances are that it will also lose its competitive resources, energy, and commitment of its people (Amabile, 1998). As a result, Torrance (1992) even made a plea for creating national encouragement for creativity and innovation by valuing "adventurousness, willingness to try difficult tasks, independence in thinking and judgement, courage, industriousness, high energy, determination, persistence, self-confidence, sense of humor, versatility, willingness to take risks, and curiosity" (p.237).

The common metrics of evaluation in academia are publication, teaching, service, and grant application; however this "narrow university measures of academic achievement can overlook real organizational change" (Heaton, 2005, p. 254). The merits of increasing creativity in an academic environment not only enhance the possibility of research interests but also staff will experience internal and external rewards (Heaton, 2005). In this paper, a preliminary model and the research that underlies it, suggests a number of management implications to facilitate creativity development in an academic department. Mumford (2000) pointed out through multiple interventions of the individual, the group, the organization, and the environment, that the manifestation of creativity will be enhanced in organizations. Additionally, Hunter et al. (2007) argued that research should place more value on the factors (creative people, climate perceptions, and climate assessments) that enhance creativity and innovation in the organization settings. As a result, it is suggested that organizational researchers could put more weight on the study of fostering creativity in academia. By doing so, it will be beneficial for energizing an academic department.

References

Amabile, T. M. (1996). *Creativity in context: Update to the social psychology of creativity*. Boulder, Colorado: Westview Press.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal, 39*(5), 1154-1184.

Amabile, T. M. (1997). Motivating creativity in organizations: On doing what you love and loving what you do. *California Management Review*, *40*(1), 39-58.

Amabile, T. M. (1998). How to kill creativity. *Harvard Business Review, 76*(5), 76-87.

Bass, B. M. (1985). *Leadership and performance beyond expectation*. New York: Free Press.

Batey, M., & Furnham, A. (2006). Creativity, intelligence, and personality: A critical review of the scattered literature. *Genetic, Social & General Psychology Monographs, 132*(4), 355-429.

Baughman, W. A., & Mumford, M. D. (1995). Process-analytic models of creative capacities: Operations influencing the combination-and-reorganization process. *Creativity Research Journal, 8*(1), 37-62.

Cangemi, J., & Miller, R. (2007). Breaking-out-of-the-box in organizations: Structuring a positive climate for the development of creativity in the workplace. *The Journal of Management Development, 26*(5), 401-410.

Craft, A., Gardner, H., & Claxton, G. (2008). Nurturing creativity, wisdom, and trusteeship in education. In A. Craft, H. Gardner, & G. Claxton (eds.). *Creativity, wisdom, and trusteeship* (pp. 1-13). Thousand Oaks, CA: Corwin Press.

Csikszentmihalyi, M. (1988).Society, culture, and person: A systems view of creativity. In R. J. Sternberg (Ed.). *The nature of creativity: Contemporary psychology perspectives* (pp. 325-339). New York: Cambridge University Press.

Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. New York, NY: HarperCollins.

Cummings, A., & Oldham, G. R. (1997). Enhancing creativity: Managing work contexts for the high potential employee. *California Management Review, 40*(1), 22-38.

DiLiello, T. C., & Houghton, J. D. (2006). Maximizing organizational leadership capacity for the future: Toward a model of self-leadership, innovation and creativity. *Journal of Managerial Psychology: Self-leadership, 21*(4), 319-337.

Dimock, M. (1986). Creativity. *Public Administration Review, 46*(1), 3-7.

Ekvall, G., & Ryhammar, L. (1999). The creative climate: Its determinants and effects at a Swedish university. *Creativity Research Journal, 12*(4), 303-310.

Ford, C. M. (1996). A theory of individual creative action in multiple social domains. *Academy of Management Review, 21*(4), 1112-1142.

Gardner, H. (1993). *Creating minds: An anatomy of creativity seem through the lives of Freud, Einstein, Picasso, Stravinsky, Eliot, Graham, and Gandhi*. New York, NY: BasicBooks.

Gong, Y., Huang, J. C., & Farh, J. L. (2009). Employee learning orientation, transformational leadership, and employee creativity: The mediating role of employee creative self- efficacy. *Academy of Management Journal, 52*(4), 765-778.

Haring-Smith, T. (2006). Creativity research review: Some lessons for higher education. *Peer Review, 8*(2), 23-27.

Hennessey, B. A. (2003). The social psychology of creativity. S*candinavian Journal of Educational Research, 47*(3), 253-271.

Hirst, G., Van Knippenberg, D., & Zhou, J. (2009). A cross-level perspective on employee creativity: Goal orientation, team learning behavior, and individual creativity. *Academy of Management Journal, 52*(2), 280-293.

Heaton, J. W. (2005). The vital role of creativity in academic departments. *BJU International, 96*(3), 254-256. doi:10.1111/j.1464-410X.2005.05613.x

Howell, J. M., & Avolio, B. J. (1993). Transformational leadership, transactional leadership, locus of control, and support for innovation: Key predictors of consolidated-business-unit performance. *Journal of Applied Psychology, 78*(6), 891-902.

Hunter, S. T., Bedell, K. E., & Mumford, M. D. (2007). Climate for creativity: A quantitative review. *Creativity Research Journal, 19*(1), 69-90. doi:10.1080/10400410701277597

Jung, D. I. (2000). Transformational and transactional leadership and their effects on creativity in groups. *Creativity Research Journal, 13*(2), 185-195.

Ludwig, A. M. (1992). Culture and creativity. *American Journal of Psychotherapy, 46*(3), 454.

Mumford, M. D. (1995). Situational Influences on Creative Achievement: Attributions or Interactions? *Creativity Research Journal, 8*(4), 405-412.

Mumford, M. D. (2000). Managing creative people: Strategies and tactics for innovation. *Human Resource Management Review, 10*(3), 313-351.

Niu, W., & Sternberg, R. J. (2003). Societal and school influences on student creativity: The case of China. *Psychology in the Schools, 40*(1), 103-114. doi:10.1002/pits.10072

Niu, W., & Sternberg, R. J. (2006). The philosophical roots of Western and Eastern conceptions of creativity. *Journal Of Theoretical And Philosophical Psychology, 26*(1), 18-38. doi:10.1037/h0091265

Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management Journal, 39*(3), 607-634.

Scott, G., Leritz, L. E., & Mumford, M. D. (2004). The effectiveness of creativity training: A quantitative review. *Creativity Research Journal, 16*(4), 361-388. doi:10.1207/s15326934crj1604_1

Shalley, C. E. (1995). Effects of coaction, expected evaluation, and goal setting on creativity and productivity. *Academy of Management Journal, 38*(2), 483-503.

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

Shipton, H., Fay, D., West, M., Patterson, M., & Birdi, K. (2005). Managing people to promote innovation. *Creativity & Innovation Management, 14*(2), 118-128. doi:10.1111/j.1467-8691.2005.00332.x

Simonton, D. K. (2000). Creativity: Cognitive, personal, developmental, and social aspects. *American Psychologist, 55*(1), 151-158. doi:10.1037/0003-066X.55.1.151

Simonton, D. K. (2006). Creative genius, knowledge, and reason: The lives and works of eminent creators. In J. C. Kaufman & J. Baer (eds.). *Creativity and reason in cognitive development* (pp. 43-59). New York, NY: Cambridge University Press.

Sosik, J. J., Kahai, S. S., & Avolio, B. J. (1998). Transformational leadership and dimensions of creativity: Motivating idea generation in computer-mediated groups. *Creativity Research Journal, 11*(2), 111-121.

Sternberg, R. J. (2003). Creative thinking in the classroom. *Scandinavian Journal of Educational Research, 47*(3), 325-338.

Sternberg, R. J. (2005). WICS: A model of positive educational leadership comprising wisdom, intelligence, and creativity synthesized. *Educational Psychology Review, 17*(3), 191-262.

Taylor, C. W. (1988). Various approaches to and definitions of creativity. In R. J. Sternberg (Ed.). *The nature of creativity: Contemporary psychology perspectives* (pp. 99-121). New York: Cambridge University Press.

Torrance, E. (1992). Invited reaction: Hidden information in corporate creativity in Japan. *Human Resource Development Quarterly, 3*(3), 235-238.

Ui Haq, I., Ali, A., Umer Azeem, M., Tahir Hijazi, S., Masood Qurashi, T., & Quyyum, A. (2010). Mediation role of employee engagement in creative work process on the relationship of transformational leadership and employee creativity. *European Journal of Economics, Finance and Administrative Sciences, 25*, 94-101.

Umiker, W. (1988). Applied creativity. *S.A.M. Advanced Management Journal, 53*(3), 9-12.

Unsworth, K. L., Wall, T. D., & Carter, A. (2005). Creative requirement: A neglected construct in the study of employee creativity? *Group & Organization Management, 30*(5), 541-560.

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