



## Motivating creativity: The effects of sequential and simultaneous learning and performance achievement goals on product novelty and usefulness



Ella Miron-Spektor<sup>a,\*</sup>, Gerard Beenen<sup>b</sup>

<sup>a</sup> Faculty of Industrial Engineering and Management, Technion – Israel Institute of Technology, Haifa 32000, Israel

<sup>b</sup> Mihaylo College of Business and Economics, California State University, Fullerton, Fullerton, CA 92834-6848, United States

### ARTICLE INFO

#### Article history:

Received 19 December 2012

Accepted 2 January 2015

Available online 23 February 2015

Accepted by Paul Levy

#### Keywords:

Creativity

Novelty

Usefulness

Achievement goal orientations

Learning

Performance

Flexibility

Closure

Negative affect

### ABSTRACT

Today's organizations must foster conditions that motivate employees to develop creative solutions that are both novel and useful. Yet product novelty and usefulness have been characterized by distinct, mutually exclusive motivational processes. We test theory on how learning and performance achievement goals can motivate individuals to develop products that are both novel and useful. In an experimental study ( $n = 189$ ) using a product development task, a learning achievement goal enhanced novelty by increasing cognitive flexibility. A performance achievement goal enhanced usefulness by increasing cognitive closure. Furthermore, simultaneous inducement of learning and performance goals enhanced novelty and usefulness more than sequential inducement of each goal. Cognitive flexibility and closure mediated the effects of simultaneous goals on both creativity dimensions, with too much cognitive closure thwarting product novelty. The benefits of simultaneous over sequential goals were mitigated when individuals experienced negative affect. Implications for creativity in organizational settings are discussed.

© 2015 Elsevier Inc. All rights reserved.

### Introduction

To stay competitive, today's knowledge-based organizations must foster conditions that motivate employees to develop creative solutions that are novel and original, yet also useful, feasible and appropriate to a situation (Amabile, 1983; Grant & Berry, 2011). This is easier said than done because these two dimensions of creativity are motivated by distinct or even opposite conditions (Bechtoldt, De Dreu, Nijstad, & Choi, 2010; Beersma & De Dreu, 2005; Berg, 2014; Litchfield, 2008; Mueller, Melwani, & Goncalo, 2011; Rietzschel, Nijstad, & Stroebe, 2010). For instance, individuals generate novel solutions when they are intrinsically motivated (Grant & Berry, 2011), feel safe to take risks, and are eager to learn and explore new domains (Hirst, Van Knippenberg, & Zhou, 2009). In contrast, individuals develop useful and feasible solutions when they consider the perspective of others (Grant & Berry, 2011), and are eager to reduce uncertainty by drawing on well-known practices and frameworks (Janssen & van Yperen, 2004; Mueller et al., 2011).

Given this inherent creative tension between novelty and usefulness that is captured by phrases such as 'disciplined imagination' (Weick, 1989), and 'accepted deviance' (Sutton & Staw, 1995: 379), an important question is how can organizations motivate employees to develop ideas and solutions that are both novel and useful? For example, should managers encourage employees to take risks and explore new knowledge domains while concurrently recognizing and rewarding effective solutions that are valued by customers? Or should they encourage employees to focus on developing new skills and knowledge during one phase of the creativity process, and on reducing risk by selecting the most feasible solutions during another phase? This study aims to answer these questions by investigating how simultaneous and sequential learning and performance achievement goals motivate individuals in ways that foster either, or both, the novelty and usefulness dimensions of creativity.

Achievement goals are cognitive frames that motivate an individual's pursuits in achievement settings (Dweck & Leggett, 1988). More general than challenging goals (Locke & Latham, 2002), and more specific than intentions, achievement goals influence how people approach a task and allocate their attention and effort to accomplish desired end states (Elliot & Church, 1997; Elliot & McGregor, 1999; Harackiewicz, Barron, Elliot, Tauer, &

\* Corresponding author. Fax: +972 4 829 5688.

E-mail addresses: [ellams@ie.technion.ac.il](mailto:ellams@ie.technion.ac.il) (E. Miron-Spektor), [gbeenen@fullerton.edu](mailto:gbeenen@fullerton.edu) (G. Beenen).

Crater, 2000). The  $2 \times 2$  model of achievement goals crosses learning and performance achievement goal frames with approach and avoidance goal frames (Elliot & McGregor, 2001). A learning achievement goal motivates individuals to focus on improving their own competence and exploring new knowledge or skills (Dweck & Leggett, 1988). A performance achievement goal motivates individuals to demonstrate their competence, and to seek favorable judgments from others (Elliot & McGregor, 2001; VandeWalle, 1997). Approach frames focus on pursuit of gains while avoidance frames focus on averting losses (e.g., Elliot & Church, 1997; Elliot & McGregor, 2001).<sup>1</sup> Achievement goals can be conceptualized as traits, or can be triggered as context-specific or experimentally-induced states (Bouffard, Boisvert, Vezeau, & Larouche, 1995; Bunderson & Sutcliffe, 2003; Dweck & Leggett, 1988; Elliot & Church, 1997; Payne et al., 2007). The findings of both trait and state approaches to achievement goals tend to be consistent with one another (Chen & Mathieu, 2008; Kozlowski et al., 2001). This study focuses on achievement goals as induced states.

Research on achievement goals and creativity has shown that an avoidance frame hinders one's willingness to perform creative tasks (e.g., Gong, Kim, Lee, & Zhu, 2013; Hirst et al., 2009; Janssen & Van Yperen, 2004; Shalley & Koseoglu, 2012).<sup>2</sup> Studies with approach frames have showed equivocal findings. Some documented positive effects of learning and performance achievement goals on problem-solving and creativity (Gong et al., 2013; Hirst et al., 2009; To, Fisher, Ashkanasy, & Rowe, 2011), while others showed null, nonlinear or negative effects (e.g., Bunderson & Sutcliffe, 2003; Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002; Harackiewicz et al., 2000; Janssen & Van Yperen, 2004; Midgley, Kaplan, & Middleton, 2001; To et al., 2011). Hirst et al. (2009) suggested a learning achievement goal contributes mainly to the novelty aspect of creativity and less to its usefulness. Others suggested that a performance achievement goal hinders one's willingness to take risks and focuses employees on feasible solutions that will be valued by others (Janssen & Van Yperen, 2004). Since these studies did not empirically distinguish novelty and usefulness, the effects of learning and performance approach goals on each creativity dimension remain unknown.

Furthermore, situational cues can motivate both learning and performance achievement goals. Individuals can pursue both goals simultaneously or switch achievement goals in response to different situational cues (Barron & Harackiewicz, 2001). Yet, the effect of combined learning and performance achievement goals on creativity has not been tested. More specifically, it is unclear whether simultaneous or sequential pursuit of both achievement goals may be more effective at motivating creativity. On the one hand, pursuing achievement goals sequentially may prevent one goal from interfering with the other. On the other hand, simultaneous focus on both goals may enable synergies and integration between learning and performing (Chen & Mathieu, 2008; Kozlowski & Bell, 2006).

To unravel these potential effects of learning and performance achievement goals we examined the influence of induced simultaneous and sequential learning and performance achievement goals on how effective individuals are at developing novel and useful solutions. We hypothesized learning and performance achievement goals would distinctly contribute to product novelty and usefulness through different cognitive processes. We also expected negative affect would limit individuals' ability to reap the benefits associated

with simultaneous goals. We tested our predictions in an experimental study using a product development task that allowed us to isolate the independent, sequential, and simultaneous effects of induced learning and performance achievement goals on idea novelty and usefulness.

### Learning and performance achievement goals and creativity

Achievement settings can provide strong situations that activate both learning and performance goals (Barron & Harackiewicz, 2001; Pintrich, 2000). For example, students can be simultaneously eager to learn and attain high grades in a course that is important for their career (Elliot & Church, 1997). Product developers can be motivated to develop new skills and to outperform competitors by creating superior products (Janssen & Van Yperen, 2004). Some have argued that pursuing both achievement goals can be an optimal self-regulatory profile in most work settings (Button, Mathieu, & Zajac, 1996; Elliot & Church, 1997; Harackiewicz et al., 2000; Pintrich, 2000), and that "adaptive individuals effectively coordinate performance and learning goals" (Dweck & Leggett, 1988, p. 260). A few studies supported this by showing students with above median learning and performance goal orientations had better grades and higher task interest than those who were above median for only one goal (Ames & Archer, 1988; Bouffard et al., 1995; Meece & Holt, 1993; Pintrich, 2000; Porter, Webb, & Gogus, 2010; Schraw, Horn, Thorndike-Christ, & Bruning, 1995). Barron and Harackiewicz (2001) compared the inducement of learning or performance achievement goals to their simultaneous inducement, and showed the benefits of the latter for problem-solving. Others found interactions between trait achievement goals and situational inducement of achievement goals on performance trajectories (Chen & Mathieu, 2008) and creativity (Hirst et al., 2009) and showed that situational inducements to learn and perform can lead to performance synergies (Beenen, 2014).

To understand how the pursuit of both learning and performance achievement goals affect novelty and usefulness we first discuss how framing a task as an opportunity to learn or perform elicits different processes that in turn contribute to novelty and usefulness. We then discuss the benefits of simultaneous versus sequential pursuit of both goals, and suggest their effect depends on one's emotional state.

#### *Learning achievement goals, cognitive flexibility and novelty*

Learning achievement goals motivate individuals to gain new knowledge, experiences and skills (Barron & Harackiewicz, 2001; VandeWalle, Cron, & Slocum, 2001). Consequently, they are likely to focus individuals on unfamiliar knowledge domains that provide the most learning potential. Indeed, learning oriented individuals seek out complex and challenging tasks that allow them to develop new capabilities and learn from mistakes (Janssen & Van Yperen, 2004). They are intrinsically motivated (Rawsthorne & Elliot, 1999) and predisposed towards positive affect (Huang, 2011), each of which broaden attention span and encourage exploration of new domains (De Dreu, Baas, & Nijstad, 2008; Fredrickson, 2001).

Because a learning achievement goal facilitates trial and error learning and increases the number of explored strategies and knowledge domains (Kozlowski & Bell, 2006), we expect individuals who adopt a learning goal will demonstrate higher cognitive flexibility in a creative task. Cognitive flexibility is manifested as solutions that belong to different categories or that combine knowledge or skills from diverse and remote domains (De Dreu et al., 2008). For example, when generating ideas, individuals can access and use many distinct semantic categories or draw from

<sup>1</sup> Researchers also sometimes refer to learning goals as "mastery goals" (e.g., Elliot & McGregor, 2001), and performance-approach goals as "prove-performance" goals (e.g., Payne, Youngcourt, & Beaubien, 2007).

<sup>2</sup> Similar to others (Chen & Mathieu, 2008; Harackiewicz et al., 2000), we concentrate on the approach frames, because our focus was on the different ways individuals approach performing well on a creativity task, rather than how they seek to avoid performing poorly on a creativity task.

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات