

The Impact of Self-Efficacy, Growth Mindset, Empowerment and Training on Employees' Innovation Capability: A Conceptual Framework

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Abstract

Under the circumstances of fierce competition brought by fast technological development, employee innovation capability as a determinant of an organization's performance, plays a significant role in developing new products, improving quality and gaining a competitive advantage. This is a conceptual paper to study the factors that influence employees' innovation capacities based on the analysis and knowledge obtained from relevant literature, focusing on self-efficacy, growth mindset, empowerment and training. Self-efficacy and growth mindsets are psychological factors to reflect individual differences in perceiving their innovation capabilities, while empowerment and training are organizational factors that are likely to be positively related to employees' innovation capacity. Although the paper is narrative or descriptive in nature and non-statistical, it is conducive to inspiring a better comprehension of employees' innovation capacity.

Keywords

Innovation Capability, Self-Efficacy, Growth Mindset, Empowerment, Training

Introduction

The business environment has changed rapidly with the invention of Artificial Intelligence (AI), Internet of Things (IOT), Additive Manufacturing (3D Printing) and Robotics (Burrus, 2019; Gallagher, 2019; Schwab, 2016). These fast technological changes have brought challenges to business, resulting in a heavy investment of business organization to keep up with the changes in technology. Innovation, associated with creative ideas, new products, advanced technologies, as well as updated skills, has become one of ways for organizations to cope with the changes (Birdi, Leach & Magadley, 2016; Saunila, 2017). However, innovation does not take place naturally. Some leading companies lost their competitive advantages or even went bankrupt due to the inability to innovate. For example, Kodak, once a giant in the photography industry in the 1970s, went bankrupt in 2012, as a consequence of failing to adapt with innovation to the trend of digital era, neither transit its core business from printers to

digital photography, which was seized as an opportunity by its competitor Fuji (Anthony, 2016). Similarly, Yahoo and Nokia were also the cases that were too complacent about their past achievement and overlooked continuous innovation, without updating themselves to cope with the rise of social networks and smart phones, resulting in their downfall finally (Dwoskin, 2016; McKinney, 2015). Therefore, it is innovation that maintains an organization competitive in a sustainable development (Iddris, 2016; Standing et al, 2016).

Organization's innovation greatly relies on employees' innovation capacities. Employees, both as individuals, team members and active members of communities of practice, contribute considerably to an organization's achievement in innovative activities (Standing et al., 2016). It is vital for firms to develop employee innovation capacities in order to cope with market fluctuations and reinforce the economic position of the firm by generating new market opportunities (Fagerberg, Mowery & Nelson, 2005). For organizations, employees are the most valuable assets and should be encouraged to share their expertise, experience, skills, and proposals by creating an environment to inspire their innovative thinking and activities (Saunila, 2017). As the most important determinant of an organization's performance, employee innovation capacity is a source of competitive advantage and considered to be the key driver of organization's success (Calantone, Cavusgil & Zhao, 2002; Saunila, 2017). Therefore, all types of organizations are seeking opportunities of expansive employee involvement in innovation work and endless enhancement (Amundsen et al., 2014).

Although factors influencing innovation capacities have been studied by previous researchers or practitioners, the determinants were not adequately identified (Anderson et al, 2014). The aim of the current study is to increase employees' innovation capacity, conceptualizing a framework to explore the factors that influence employees' innovation capacities based on the analysis and knowledge obtained from relevant literature, focusing on self-efficacy, growth mindset, empowerment and training. Self-efficacy and growth mindsets are psychological factors to reflect individual differences in perceiving their innovation capabilities, while empowerment and training are organizational factors that are likely to be positively related to employees' innovation capacity. This conceptual paper is to combine multidimensional influencing factors and inspire a better comprehension of employees' innovation capacity.

Innovation Capability

Innovation is a process of creating value through a new way or different solution to solve an existing problem or satisfy a new need (Kusiak, 2009; Saray, Patache & Ceran, 2017). As summarized in the EC's Green Paper, innovation incorporates three broad dimensions: (i) "the renewal and enlargement of the range of products and services and the associated markets"; (ii) "the establishment of new methods of production, supply and distribution"; and (iii) "the introduction of changes in management, work organization, and the working conditions and skills of the workforce" (EC, 1995). So innovation can be viewed as establishing a new process or developing

a new product to meet the needs of society. Some literature distinguished between radical innovation and incremental innovation according to the degree of innovation. Radical innovation refers to the remarkable innovation developed from important new technologies to produce a new product, new market, or new technology (e.g. Moosmayer & Koehn, 2011). By contrast, incremental innovation refers to the adaptation process of existing products, services, or technology leading to better performance or results (e.g. Ramadani & Gerguri, 2011).

The realization of innovation depends on innovation capabilities, which were considered as actions that help to improve the success of innovation activities (Lawson & Samson, 2001). Many studies on innovation capability attempted to develop the concept itself and tried to pinpoint the essential capabilities that allow the firm to innovate (Birdi, Leach & Magadley, 2016; Kanter, 1983; Lawson & Samson, 2001; Saunila, 2017), but there was lack of consensus on how to define innovation capability (Zawislak, 2012). According to Kanter (1983), innovation capability can be interpreted as the ability to bring new problem-solving ideas by taking advantage of organizational resources and create value by applying them into practice. It is found that literature on innovation capability can be generally divided into two categories: organization-focused and individual-focused. The former refers to the studies investigating innovation capability at the firm level in terms of organizational dimensions, for example, organizing structure, leadership, work climate, knowledge sharing, and know-how development (Iddris, 2016; Saunila, 2017). While the latter refers to the studies focusing on individuals with an attempt to explore personal characteristics influencing individual innovation capability, such as personality, mood, motivation, cognitive abilities and skills, achievement orientation, content knowledge (Birdi, Leach & Magadley, 2016; Hero, Lindfors & Taatila, 2017; Standing et al., 2016). Studies combining individual factors with organizational factors should be enriched to have a more complete picture of innovation capability since employees and their organization cannot be separated and the interdependency need to be addressed.

Self-Efficacy

Self-efficacy is a core concept of *Social Cognitive Theory* (SCT), proposed by psychologist Albert Bandura. According to SCT, self-efficacy as a good indicator of performance not only helps understand individual's behavior, but also the antecedents and consequences of these behaviors, because self-efficacy implies: (a) individuals' judgements on the level of task difficulty, (b) how strongly they believe they are capable of coping with a task of that difficulty, and (c) the ability to generalize their capabilities and apply them from one area to another (Bandura, 1988; Stajkovic & Luthans, 1998). Self-efficacy influences individual's decisions on action and how much effort will be invested in the face of setbacks or challenges (Stajkovic & Luthans, 1998). In other words, the actions that people decide to take, the goals they set for themselves, the sustainment of effort invested in the activities, as well as the expectations of the effort are affected by efficacy beliefs (Bandura, 1977; Schunk, 1981). Different people may perform poorly, satisfactorily, or surprisingly even though they have similar skills, or the same person may also have different performance under different circumstances, due to fluctuations in their efficacy beliefs (Bandura, 1997). When it comes to

innovation, it is believed that employees with strong self-efficacy are more likely to be innovative at workplace and this correlation has been demonstrated in some studies. For example, Momeni, Ebrahimpour and Ajirloo (2014) examined the effect of employees' self-efficacy on their innovative behavior in a sample of Social Security Organization employees in Ardabil province and the data analysis showed that employees' self-efficacy is positive and statistically significant related to innovative job behavior. Hsu, Hou and Fan (2011) in their study in service setting suggested that employees with a high level of innovation self-efficacy indicated a high level of innovative behavior at work.

Growth Mindset

Mindset is someone's general attitude and the way they typically think about things to make decisions (Johnson & Stapel, 2010). Stanford University psychologist Carol Dweck (1999) distinguished growth mindset from fixed mindset in her research attempting to explore why some people in life thrive while others flounder. According to Dweck (1999, 2006), growth mindset is a belief that all human qualities including intelligence can be nurtured or developed through dedication, perseverance, and the right strategy. Unlike people with fixed mindset, who view intelligence as something about aptitude that one was born with and their anxiety and fear will increase when facing challenges, probably leading to a bad performance, people with growth mindset are positive to improve their qualities or abilities with more investment of effort and they perceive obstacles as a natural part of learning with an expectation to acquire personal growth through hard-working on challenging problems (Dweck, 2006; Ng, 2018). An individual with a growth mindset is not likely to be satisfied with the status quo and is always trying to do things better, being open to learning, keeping up to date with the new trend, continually seeking new improvements and pursuing an upward spiral of self-development (Barhava-Monteith & Fong, 2018; Ng, 2018). Therefore, employees with a growth mindset are expected to be more innovative by persistently learning new things and opening their minds to different approaches (Zaman, 2016). Although earlier literature theoretically supported the positive relationship between growth mindset and innovation capacity, few studies have empirically proved the impact of growth mindset on innovation capability.

Empowerment

Employee empowerment is of great interest to academics and practitioners. The study of empowerment can be traced back to the 1930s, but it was not until the 1980s that empowerment practices received much attention (Kim & Fernandez, 2017). Although there is no consensus on how to define it, previous literature indicated that employee empowerment can be interpreted from perspective of psychology and management. Under the psychological framework of empowerment, people think they have power to make decisions in coping with events or situations they confront (Conger & Kanungo, 1988). While in management practices, employee empowerment means that managers grant power and delegate responsibilities to front-line employees (Bowen & Lawler, 1992). Bowen and Lawler (1992) defined the classical managerial empowerment practices are "(1) information about the organization's performance, (2) rewards based on the organization's performance, (3) knowledge that enables

employees to understand and contribute to organizational performance, and (4) power to make decisions that influence organizational direction and performance”. Therefore, it is considered that empowerment occurs when organizations distribute power, information, knowledge, and rewards throughout the organization. Empowerment allows employees more freedom to access to information, resources and support, as well as more opportunities to learn and grow, enabling them to meet the increasing demand for innovation in a speeding globalization and intense competition. Aneta (2016) concluded that empowerment can strongly enhance individuals’ subjectivity, which means empowered employees are more initiative to be involved in innovation. Saray, Patache and Ceran (2017) claimed that individuals and teams are more likely to work on shared goals in an employee empowering organization, and they are encouraged to innovate with less fear of failure and more tolerance of mistakes, so their risk-taking awareness, decision-making skills and problem-solving techniques can be developed, which are crucial for boosting innovation capability. Demircioglu (2017) in a study of employees in Australian Public Service revealed that a unit increase in granting power to employees has a considerable effect on reducing perceived barriers to innovation, indicating that the employee empowerment practices are conducive to removing obstacles of innovation.

Training

It is widely recognized that employee knowledge and skills are highly required in the process of innovation and the type or level of knowledge and skills employees have mastered play as essential resources for the perfection of current products or services, or for the construction of new ones (Lu et al., 2015; Naranjo-Valencia & Naranjo-Herrera, 2018; Talib & Mustafa, 2014). Training is considered a good way to enhance employee innovation capacity as it provides employee updated knowledge and skills that enable them to succeed in innovation more probably by better understanding complicated products and production processes (Bauernschuster, Falck & Heblich, 2009). The importance of training in innovation has been theoretically supported by knowledge management, related to acquiring, transferring and implementing knowledge, which are the principal functions of training, being considered crucial for innovation (Donate and Guadamillas, 2011). Naranjo-Valencia and Naranjo-Herrera (2018) examined the impact of training practices on innovation and they studied training practices in four dimensions: planning, alignment, assessment, and resources. Planning means training should be well designed and proactive investigation should be made to make sure the training is able to provide the knowledge or skills necessary for employees to improve their jobs. Alignment refers to aligning trainings with organizational goals and strategies. Assessment involving evaluation of the effectiveness of training and identifying future improvements. Resources refer to the investment in training, such as capital, time, as well as personnel. Previous studies demonstrated empirically-validated evidence of the relationship between training and innovation. For example, Shipton et al. (2006) surveyed a sample of manufacturing companies to study how human resource practices affected innovation and they found that far-reaching training had positive impact on technical innovation. Bauernschuster et al. (2009) evaluated the effect of training practices on the innovation in German

companies and the results showed a 10 percent increase of training intensity led to a 10 percent higher inclination to innovate, suggesting that constant training played a positive role in a company's innovative activities. Dostie (2018) used the data in Canadian Workplace and Employee Survey 1999-2006 and the statistical analysis justified more training brought more product and process innovation.

Recommendations on Methodologies for Future Research

Research objectives and research questions should drive a researcher choice of research methodology (Johnson & Onwuegbuzie, 2004). This study's research objectives are to understand the impact and the effect size of each independent variable (employee self-efficacy, employee growth mindset, organization work empowerment, and organizational training) on the dependent variable (employees' innovation capability). Therefore, a quantitative study is suggested to be used in future research. A survey should be conducted to collect data on the dependent variable and the independent variables. Demographics and correlation analysis would be processed by using Smart-PLS to find answers to the research questions.

Conclusions

Within the context of a global competitive society, innovation has been recognized as a crucial factor allowing companies to create value and to attain a sustainable competitive advantage. Literature is reviewed to identify what factors would have remarkable effect on employee innovation capacity, based on which the research objectives and questions have been formulated. The conceptual framework provides a direction for future research and have some implications for academic and practitioners on how to enhance employee innovation capacity.

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