

## The role of creative self-efficacy, transformational leadership, and digital literacy in supporting performance through innovative work behavior: Evidence from telecommunications industry

Henny Santoso<sup>a\*</sup>, Elidjen<sup>a</sup>, Sri Bramantoro Abdinagoro<sup>a</sup> and Muhtosim Arief<sup>a</sup>

<sup>a</sup>Management Department, BINUS Business School Doctor of Research in Management, Bina Nusantara University, Jakarta, 11480, Indonesia

### CHRONICLE

#### Article history:

Received: June 19 2019

Received in revised format: June 20 2019

Accepted: July 14, 2019

Available online:

July 15, 2019

#### Keywords:

*Creative Self-Efficacy*

*Digital Literacy*

*Innovative Work Behavior*

*Strategic Management*

*Telecommunication Industry*

*Transformational Leadership*

### ABSTRACT

In the current technology shifting era, technology plays an essential function that determines the continuity of the industry. The current technology advancements empower companies to produce creativity and innovation to serve customer needs and expectation. To deliver this challenge, it requires the continuous breakthrough and innovation. To create organization innovation, employee plays the main key, as the main source and the executor of innovation. The organizational environment in knowledge-based industries, especially in the telecommunication industry, it is very dynamic and work activities tend to involve non-standard tasks and complicated non-routines. Routines carried out by organizations may not be able to respond quickly to rapid technological changes, or often experience technical problems that require fast and creative solutions. This study, focused on the innovative work behavior on employee perspective (creative self-efficacy and transformational leadership) and tested the digital literacy role on moderating the relationship between innovative work and employee performance. This study was made based on the survey conducted at various telecommunication companies across Indonesia comprising of 235 participants with managerial level and above. Structural equation modeling (LISREL) was used for data analysis in this quantitative research. The result proved that there was a positive and significant relationship between creative self-efficacy, transformational leadership and innovative work behavior, innovative work behavior was positively related to performance, digital literacy gave significant moderating influences on the relationship between innovative work behavior and performance.

© 2019 by the authors; licensee Growing Science, Canada

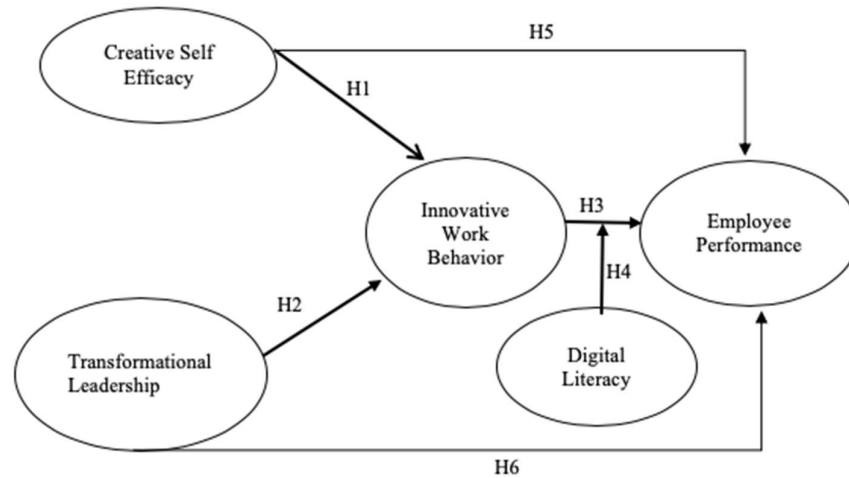
## 1. Introduction

In the current technology shifting era, technology plays an essential function that determines the continuity of the industry. According to Spanuth and Wald (2017), the current technology advancements empower companies to produce creativity and innovation in order to serve customer needs and expectation. To deliver this challenge, it requires the continuous breakthrough and innovation. To produce organization innovation, employee plays the main key, as the main source and the executor of innovation. The organizational environment in knowledge-based industries, especially the telecommunication industry, it is very dynamic (Shih & Susanto, 2011) and work activities tend to involve non-standard tasks and complicated non-routines (Chen et al., 2015). Routines carried out by organizations may not be able to respond quickly to rapid technological changes, or often experience technical problems that require fast

\* Corresponding author.

E-mail address: [hennysantoso2604@gmail.com](mailto:hennysantoso2604@gmail.com) (H. Santoso)

and creative solutions. Therefore, employees in this industry need to develop, support and implement new methods, approaches or procedures (Van Minh et al., 2017) to overcome challenges in their work environment. They must be able to perform tasks that go beyond the routines that have been set for the team, group, or organization. They might look for new technologies, suggest new ways to achieve goals, apply new work methods, and investigate and secure resources for apply new ideas (Yuan & Woodman, 2010). In this study, we focus on the innovative work behavior on employee perspective (creative self-efficacy and transformational leadership) and examine the digital literacy role on moderating the relationship between innovative work and employee performance. The proposed model is shown in Fig. 1.



**Fig. 1.** Research Model

## 2. Literature review

### 2.1. Creative self-efficacy and innovative work behavior

According to Chiang et al. (2013), people with high creative self-confidence are sensitive to positive stimuli and tend to adopt the goal of the approach to achieve positive results. Creative self-confidence is associated with better work performance through a motivational orientation approach, which refers to the goal of setting someone to actively pursue positive results in the workplace (Hallak et al., 2018), high creative self-confidence people more active and autonomous working in pursuit of positive results. In addition, the component of creative self-confidence includes general self-efficacy, one's estimation of their own ability to do and overcome successfully with various situations (Wang et al., 2014). These findings indicate that workers with high creative self-confidence will also feel more satisfied in their work. This study proposes that self-confidence creative will be positively related to the intrinsic motivation of workers for their work. Therefore, the first hypothesis tests:

Hypothesis 1: Creative self-efficacy is positively and significantly related to innovative work behavior.

### 2.2 Transformational leadership and innovative work behavior

Transformational leadership is a multidimensional concept (Avolio & Bass, 1995; 2004). There are four main elements in the transformational leadership: ideal influence, intellectual stimulation, individual considerations, and inspirational motivation. According to Avolio and Bass (2004), the transformation leaders tend to intellectual stimulation to their team members. They always challenge the status quo, stimulate their team member to find the new work ways in order to solve the problem at work. The

transformational leaders consider their individual team member. They are an inspirational motivation for their team member, who give the direction to achieve the common goals. Therefore, team members choose them as their role model. These activities encourage the team members to active in ideas brainstorming, thinking about the breakthrough, and eventually can create the innovation at work. According the recent studies, the transformational leaders can encourage the climate for innovation that encourages employee creativity (Jaiswal & Dhar, 2015). Wang et al. (2014) found that the transformational leadership is positively and significantly related to employee creativity. Therefore, the second hypothesis is tested:

Hypothesis 2. Transformational leadership is positively and significantly related to innovative work behavior.

### *2.3. Innovative work behavior and employee performance*

Innovative work behavior is consisting of four group activities that interconnected each other: problem recognition, ideas generation, promotion ideas, and idea realization (Jong & Hartog, 2010). This set of activities can improve employees' ability to innovate (De Jong & Hartog, 2010). The problem recognition and idea generation are the activities to the introduction of problems. The activities of idea promotion and idea realization are the implementation the innovative ideas. The previous study showed that employee who are able and willing to create the innovation will expand their contribution beyond their work scope (Yildiz et al., 2017). This study also concluded that innovative work behavior was positively related to organizational performance. According to Dörner (2012), the innovative work behavior is positively related to their task performance. Therefore, the third hypothesis is tested:

Hypothesis 3. Innovative work behavior is positively and significantly related with employee performance.

### *2.4. Digital literacy as moderating variable to the relationship between innovative work behavior and employee performance*

In high technology industry context, especially in the telecommunication industry, digital is the core knowledge. Digital plays the main function in the day to day activities. According to Martin (2005), digital literacy is the individual awareness, attitude, and ability to use digital tools and facilities appropriately for identify, access, manage, integrate, evaluate, analyze, and synthesizing digital resources, building new knowledge, creating media expressions, and communicating with other people in the context of certain life situations, which allows constructive social action. According to Yim et al. (2013), technological innovation is a core element, which determines the company's competitiveness. Innovation based on technology plays very important role for the survival and growth of the company. Therefore, the employees in the high-tech industry, especially in the telecommunication industry are required to be aware of this technology and digitalization. Furthermore, Mohammadyari and Singh (2014) emphasized the importance for employee or individuals to analyze the digital material and to get a deeper understanding of how the digitalization impact to their jobs. This digital literacy can help them accomplish the new challenge and solve the current problem. Therefore, the fourth hypothesis is tested:

Hypothesis 4: Digital literacy moderates the relationship between innovative work behavior and employee performance

### *2.5 Creative self-efficacy and employee performance*

A sense of effectiveness focused on creativity must be conducive to creativity because it can offset the obstacles inherent in creative involvement. Creativity requires trial-and-error experimentation and the willingness to learn from these efforts. According to Chiang et al. (2013) that self-efficacy can facilitate the adoption of mastery goal orientation (Zhou et al., 2012). The recent research has found that creative

self-efficacy is associated with mastery goal orientation (Wang et al., 2014). Furthermore, domain-specific efficacy beliefs can lead to further experience of work-related flows, an affective state that is closely related to the generation of creative ideas (Chiang et al., 2013). Empirical studies tend to support the idea that self-efficacy has a greater impact on creative work behavior, rather than the impact of self-efficacy in work performance (Hallak et al., 2018). Therefore, the fifth hypothesis tests:

Hypothesis 5: Creative self-efficacy is positively and significantly related with employee performance.

### *2.6. Transformational leadership and employee performance*

Transformational leadership styles can provide useful feedback to employees, encourage them to make additional efforts to achieve new solutions, and increase their intrinsic motivation for creative thinking (Choi et al., 2016). Transformational leadership style can motivate employees to achieve goals with higher self-reinforcement, rather than developing reciprocal exchange relationships with them (Feng et al., 2016). Craig et al. (2015) evaluated the effects of different leadership styles in longitudinal laboratory experiments, and the results showed that transformational leadership had a more positive effect on group effectiveness than transactional leadership. According to Choi et al. (2016) that transformational leadership has a positive impact on creativity individual employees and organizational innovation. Therefore, the sixth hypothesis is tested:

Hypothesis 6. Transformational leadership is positively and significantly related with employee performance.

## **3. Research methodology**

### *3.1. Sample and data collection*

The research used the explanatory survey method with the unit of analysis is individual. The observation unit is the employee or individual. This study took data from 235 employees in managerial level, from team leader level until vice president level. These employees worked in the top three telecommunication companies in Indonesia, with specific areas in the core function, such as sales and marketing, IT and network, corporate strategy. Data was collected in one time frame - cross-sectional, which was done with data that was only once collected in order to answer the research question. This study used a questionnaire that was initially written in English and translated into the Indonesian language.

### *3.2. Measurement*

The researcher used six-point Likert scales ranging from 1 = “strongly disagree” to 6 = “strongly agree” to measure the study variables.

#### *3.2.1. Creative self-efficacy*

The study used the measurement from Tierney and Farmer (2011) for transformational leadership. Example of items included in the scale are ability to solve problems creatively, ability to generate new ideas, talent in developing ideas, and ability to overcome difficult problems.

#### *3.2.2. Transformational leadership*

For transformational leadership, the researcher used the measurement based on Bass (1985). The transformational leadership variable has five dimensions: intellectual stimulation, individual considerations, ideal influence (attribute and behavior), and inspirational motivation. Example of items included in the scale are the leaders' values and beliefs, the leaders' optimistic, how leaders' point of view about the problems, the leaders' coaching and mentoring.

### 3.2.3. Innovative work behavior

Regarding the nature of telecommunication industry, where technology was playing an important role, this study referred to Jong and Hartog (2010) in order to assess innovative work behavior. The innovative work behavior has four dimensions: exploration of ideas, generation of ideas, promote ideas, and implementation of ideas. Example of items included in the scale are the ability to explore new opportunities at work, the ability to find solutions, the ability to get buy in from higher management, and the ability to contribute to the implementation of new ideas.

### 3.2.4. Employee Performance

In order to measure the employee performance, we used measurement created by Koopmans et al. (2012). According to Koopmans et al. (2012), there are four dimensions of employee performance, such as task performance, contextual performance, adaptive performance, and counterproductive work behavior. Example of items included in the scale is the capability to make work plan and complete this work plan on time, the ability to take initiative to solve the problem, and the ability to adapt with the working situation.

### 3.2.5. Digital Literacy

This study referred to Martin (2005) and Ng (2012) to measure the digital literacy. According to Ng (2012), there are three dimensions in digital literacy: technical, cognitive, and social-emotional dimensions. Examples of items included in the scale are; the ability to solve technical problems at work, motivation to learn the new technologies, and willingness to use technology at work.

## 4. Results

The respondents of this study consisted of 125 males and 110 females, whose average age was 32.6 years old and all the respondents had a minimum undergraduate background. Respondents in the study have an average score (mean) of creative self-efficacy 4.03 with a standard deviation of 0.443; transformational leadership 4.63 with a standard deviation of 0.565; innovative work behavior of 4.97 with a standard deviation of 0.583; employee performance of 4.91 with a standard deviation 0.471; and digital literacy of 4.97 with a standard deviation of 0.533. Before testing the hypotheses, researchers did the hygiene test of validity and reliability for each variable as shown in Table 1 and Table 2. This research model proved fit as shown in Table 3, based on the goodness of fit indicators.

**Table 1**  
Factor Analysis Result

Variable	Dimension	Validity Result	
		Std Loading	Remarks
Creative Self-Efficacy	Ability to solve problems	0.68	Valid
	Ability to generate new ideas	0.92	Valid
	Talent in developing other people's ideas	0.72	Valid
	Ability to overcome difficult problems	0.96	Valid
	Ability to overcome problems	0.69	Valid
Transformational leadership	Intellectual stimulation	0.68	Valid
	Individual considerations	0.98	Valid
	Charisma/ Ideal influence (attribute)	0.67	Valid
	Inspirational motivation	0.99	Valid
	Charisma/ Ideal influence (behavior)	0.54	Valid
Innovative work behavior	Exploration of ideas	0.66	Valid
	Generation of ideas	0.92	Valid
	Promote ideas	0.64	Valid
	Implementation of ideas	0.96	Valid
Employee Performance	Counterproductive Work Behavior	0.68	Valid
	Adaptive Performance	0.73	Valid
	Contextual Performance	0.73	Valid
	Task Performance	0.79	Valid
Digital Literacy	Technical	0.86	Valid
	Cognitive	0.94	Valid
	Social Emotional	0.77	Valid

**Table 2**

Reliability test results

Variable	Reliability Result (Construct Reliability)	
	Result	Remarks
Creative self-efficacy	0.92	Reliable
Transformational leadership	0.93	Reliable
Innovative work behavior	0.92	Reliable
Employee performance	0.87	Reliable
Digital Literacy	0.97	Reliable

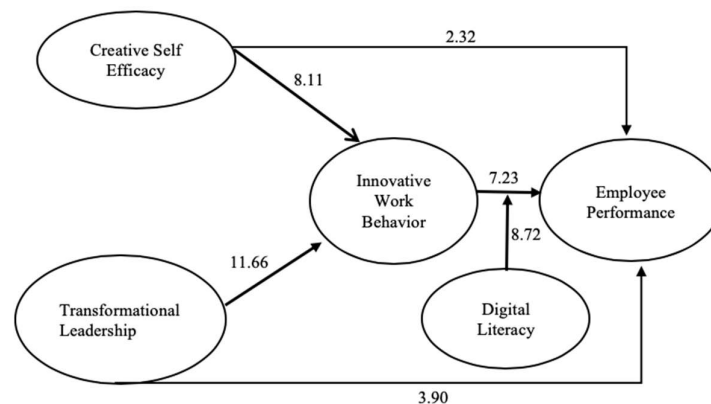
**Table 3**

Goodness of fit results

Indicators and Value	Standard Value	Remarks
NFI = 0.91	$\geq 0.90$	Good Fit
NNFI = 0.92	$\geq 0.90$	Good Fit
CFI = 0.95	$\geq 0.90$	Good Fit
IFI = 0.94	$\geq 0.90$	Good Fit
RFI = 0.96	$\geq 0.90$	Good Fit
RMR = 0.077	$\leq 0.10$	Good Fit
GFI = 0.90	$\geq 0.90$	Good Fit
AGFI = 0.97	$\geq 0.90$	Good Fit

All hypotheses of this study proved positive and significant, both with the data shown in Fig. 2 and based on the value of t generated on the test using SEM Lisrel. Then based on output t values can be seen that:

- The CSE variable gives significant influence to the IWB variable with  $t = 8.11 > 1.96$  so it has a positive and significant effect.
- The TL variable gives significant influence to the IWB variable with  $t = 11.66 > 1.96$  so it has a positive and significant effect.
- The IWB variable gives significant influence to the EMP variable with  $t = 7.23 > 1.96$  so it has a positive and significant effect.
- The DL variable gives significant influence to the relationship between IWB and EMP variable with  $t = 8.72 > 1.96$  so it becomes a moderating variable between IWB and EMP.
- The CSE variable gives significant influence to the EMP variable with  $t = 2.32 > 1.96$  so it has a positive and significant effect.
- The TL variable gives significant influence to the EMP variable with  $t = 3.90 > 1.96$  so it has a positive and significant effect.

**Fig. 2.** T-values Result

This study proved that there is a positive and significant relationship between creative self-efficacy and innovative work behavior ( $H_1$ ), transformational leadership and innovative work behavior ( $H_2$ ), innovative work behavior is positively related to performance ( $H_3$ ), digital literacy gives significant moderating influences to the relationship between innovative work behavior and performance ( $H_4$ ), creative self-efficacy and employee performance ( $H_5$ ), transformational leadership and employee performance ( $H_6$ ). Based on the t-count values in Fig. 2 above, it can be seen the direct influence and indirect effects of exogenous variables (creative self-efficacy & transformational leadership) on endogenous variables (innovative work behavior & employee performance).

**Table 4**

Direct and indirect results

Relationship Test	T- values	Direct and Indirect Relationship
CSL -IWB - EMP	58.64	Indirect Relationship
CSL - EMP	2.32	Direct Relationship
TL -IWB - EMP	84.30	Indirect Relationship
TL - EMP	3,90	Direct Relationship

The conclusions that can be drawn from the test of the effect of direct relationships and indirect relationships from Table 4 are:

- The indirect effect of creative self-efficacy on employee performance through innovative work behavior has a stronger influence (t-value = 58.64) than the direct influence of creative self- efficacy on employee performance (t-value = 2.32).
- The indirect influence of transformational leadership on employee performance through innovative work behavior has a stronger influence (t-value = 84.30) than the direct influence of transformational leadership on employee performance (t-value = 3.90).

The results of the analysis of direct or indirect influence conclude that innovative work behavior plays a role as a mediator or mediating variable where its presence in the Indonesian telecommunications industry increases the influence of creative self- efficacy and transformational leadership for employee performance.

From this research model, the structural equation shown in Fig. 3. This structural equation explains that:

- $IWB = 0.34 \times CSL$ , this explains that every one unit incremental of creative self-efficacy will increase innovative work behavior by 0.34.
- $IWB = 0.64 \times TL$ , this explains that every one unit incremental of transformational leadership will increase innovative work behavior by 0.64.
- $R^2$  value = 0.86, this explains that the magnitude of the effect is simultaneous creative self-efficacy and transformational leadership on innovative work behavior is 86%.
- $EMP = 0.86 \times IWB$ , this explains that every one unit incremental of innovative work behavior will increase employee performance by 0.86.
- $EMP = 0.14 \times CSL$ , this explains that every one unit incremental of creative self-efficacy will increase employee performance by 0.14.
- $EMP = 0.33 \times TL$ , this explains that every one unit incremental of transformational leadership will increase employee performance by 0.33.
- $EMP = 0.39 \times DL$ , this explains that every one unit incremental of digital literacy will increase employee performance by 0.39.
- $R^2$  value = 0.94, this explains that the magnitude of the effect is simultaneous creative self-efficacy, transformational leadership and digital literacy on employee performance is 94%.

IWB=0.34×CSL+0.64×TL, Errovar. = 0.14, R <sup>2</sup> = 0.86				
(0.042)	(0.055)	(0.021)		
8.11	11.66	6.50		
EMP=0.86×IWB+0.14×CSL+0.33×TL+0.39×DL, Errorvar.=0.058, R <sup>2</sup> =0.94				
(0.12)	(0.062)	(0.083)	(0.045)	(0.029)
7.23	2.32	3.90	8.72	2.04

**Fig. 3.** Structural equation model

## 5. Discussion

This study has tested a conceptual model of innovation theory in the knowledge-based industry, which is in the telecommunication industry. This conceptual model investigated the relationship between creative self-efficacy, transformational leadership, innovative work behavior, performance, and digital literacy as a moderator variable of the relationship between innovative work behavior and performance. We conclude that innovative work behavior plays a role as a mediator or mediating variable where its presence in the Indonesian telecommunications industry increases the influence of creative self- efficacy and transformational leadership for employee performance. The digital literacy moderated the relationship between innovative work behavior and employee performance. This study emphasized the importance of digital literacy on employee in order to create the innovation in organization.

### 5.1. Theoretical implications

Our study extends the innovative theory, especially in individual level or employee level from human factor perspective. The current literatures on the innovative focused on exploring how leader behavior and styles, or management skills impact may affect to the team members innovative work behavior (Chang et al., 2015; Jaiswal & Dhar, 2015). This study expands the scope on how digital literacy play moderating role in the innovative work behavior in order to achieve better employee performance at work.

### 5.2. Practical implications

Based on the result of this study, we suggest the organization should focus on innovative work behavior from the employee level. In the telecommunication industry as knowledge-based industry and high-tech organization, digital plays an important role. Therefore, we suggest to consider the digital literacy for each employee. This digital awareness can become the embedded value at works. The organizations can encounter the challenge and fulfill the customer needs through the digital knowledge and technologies. This process is a key to determine the sustainability of organization in this telecommunication industry.

### 5.3. Limitations and directions for future research

This study used one shoot - cross sectional in data retrieval. Therefore, we suggest to test the causal relationship between creative self -efficacy, transformational leadership, innovative work behavior, employee performance, and digital literacy in the further research. The study of digital literacy in the innovation context is still rare. Therefore, we suggest to enrich more factors in the future research in the innovation theory.

## References

- Avolio, B. J., & Bass, B. M. (1995). Individual consideration viewed at multiple levels of analysis: A multi-level framework for examining the diffusion of transformational leadership. *The Leadership Quarterly*, 6(2), 199-218.



- Avolio, B. J., & Bass, B. M. (2004). *MLQ—Multifactor leadership questionnaire*. Menlo Park, CA: Mind Garden, 2004.
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. Collier Macmillan.
- Chang, J., Bai, X., & Li, J. J. (2015). The influence of leadership on product and process innovations in China: The contingent role of knowledge acquisition capability. *Industrial Marketing Management*, 50, 18-29.
- Chen, M. H., Chang, Y. Y., & Chang, Y. C. (2015). Exploring individual-work context fit in affecting employee creativity in technology-based companies. *Technological Forecasting and Social Change*, 98, 1-12.
- Chiang, Y. H., Hsu, C. C., & Hung, K. P. (2014). Core self-evaluation and workplace creativity. *Journal of Business Research*, 67(7), 1405-1413.
- Choi, S. B., Kim, K., Ullah, S. E., & Kang, S. W. (2016). How transformational leadership facilitates innovative behavior of Korean workers: Examining mediating and moderating processes. *Personnel Review*, 45(3), 459-479.
- Craig, J. T. (2015). *Antecedents of individual innovative behavior: Examining transformational leadership, creative climate, role ambiguity, risk propensity, and psychological empowerment*. Alliant International University.
- De Jong, J., & Den Hartog, D. (2010). Measuring innovative work behaviour. *Creativity and innovation management*, 19(1), 23-36.
- Dörner, N. (2012). *Innovative Work Behavior: The Roles of Employee Expectations and Effects on Job Performance*, [Doctoral Thesis, University of St. Gallen 120 ps. Dissertation no. 4007].
- Feng, C., Huang, X., & Zhang, L. (2016). A multilevel study of transformational leadership, dual organizational change and innovative behavior in groups. *Journal of Organizational Change Management*, 29(6), 855-877.
- Hallak, R., Assaker, G., & El-Haddad, R. (2018). Re-examining the relationships among perceived quality, value, satisfaction, and destination loyalty: A higher-order structural model. *Journal of Vacation Marketing*, 24(2), 118-135.
- Malodia, L., & Vashisht, A. (2019). Examining the Impact of Positive Psychological Capital in Reducing Cynicism. *International Journal of Hospitality & Tourism Systems*, 12(1).
- Jaiswal, N. K., & Dhar, R. L. (2015). Transformational leadership, innovation climate, creative self-efficacy and employee creativity: A multilevel study. *International Journal of Hospitality Management*, 51, 30-41.
- Koopmans, L., Bernaards, C., Hildebrandt, V., van Buuren, S., van der Beek, A. J., & de Vet, H. C. (2013). Development of an individual work performance questionnaire. *International journal of productivity and performance management*.
- Martin, A. (2005). DigEuLit—a European framework for digital literacy: a progress report. *Journal of eLiteracy*, 2(2), 130-136.
- Van Minh, N., Badir, Y. F., Quang, N. N., & Afsar, B. (2017). The impact of leaders' technical competence on employees' innovation and learning. *Journal of Engineering and Technology Management*, 44, 44-57.
- Mohammadyari, S., & Singh, H. (2015). Understanding the effect of e-learning on individual performance: The role of digital literacy. *Computers & Education*, 82, 11-25.
- Ng, W. (2012). Can we teach digital natives digital literacy?. *Computers & education*, 59(3), 1065-1078.
- Shih, H. A., & Susanto, E. (2011). Is innovative behavior really good for the firm? Innovative work behavior, conflict with coworkers and turnover intention: Moderating roles of perceived distributive fairness. *International Journal of Conflict Management*, 22(2), 111-130.
- Spanuth, T., & Wald, A. (2017). How to unleash the innovative work behavior of project staff? The role of affective and performance-based factors. *International Journal of Project Management*, 35(7), 1302-1311.
- Tierney, P., & Farmer, S. M. (2011). Creative self-efficacy development and creative performance over time. *Journal of Applied Psychology*, 96(2), 277.

- Wang, C. J., Tsai, H. T., & Tsai, M. T. (2014). Linking transformational leadership and employee creativity in the hospitality industry: The influences of creative role identity, creative self-efficacy, and job complexity. *Tourism Management, 40*, 79-89.
- Yildiz, B., Uzun, S., & Coşkun, S. S. (2017). Drivers of innovative behaviors: The moderator roles of perceived organizational support and psychological empowerment. *International Journal of Organizational Leadership, 6*, 341-360.
- Yim, H.-K. F., Forman, H., & Kwa, H. (2013). Factors affecting new product post-adoption behavior in a major US automotive supply chain: an examination of antecedents to technology internalization. *Journal of Business & Industrial Marketing, 28*(2), 147-159.
- Yuan, F., & Woodman, R. W. (2010). Innovative behavior in the workplace: The role of performance and image outcome expectations. *Academy of management journal, 53*(2), 323-342.
- Zhou, Q., Hirst, G., & Shipton, H. (2012). Promoting creativity at work: The role of problem-solving demand. *Applied psychology, 61*(1), 56-80.



© 2019 by the authors; licensee Growing Science, Canada. This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (<http://creativecommons.org/licenses/by/4.0/>).