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Transformational Leadership Enhances Innovative Capability: The Mediating Role of Learning Orientation and Innovative Work Behaviour

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Abstract

The innovative capability factor within the organizations and universities played the significant role in the competitive business world, which have required the effective leadership to lead their organization and create the innovative capability of their employees. Transformational leadership is a potential kind of effective leader that creates the innovation success in the organization. The objectives were to confirm that the causal model of transformational leadership facilitated the innovative capability, and learning orientation and innovative work behavior are the mediating factors in the universities in north-east of Thailand. The sample size were 335 respondents selected using probability, by a multi-stage random sampling technique. Accordingly, the empirical findings had demonstrated that the model fits the empirical data by goodness of fit measures, which were considered, Chi-square = 159.74 (df = 60), p-value = 0.000, (χ2/df) = 2.66, CFI = 0.96, TLI = 0.95, RMSEA = 0.07, and SRMR=0.04. The results showed that transformational leadership facilitated the innovative capability by two main implications noted that learning orientation and innovative work behavior were very important mediating variables for enhancing innovative capability. The theoretical implications of the study were discussed to create the innovative capability considering social cognitive theory and transformational leadership theory. This research results provide both empirical and theoretical contribution focusing on social cognitive theory and transformational leadership theory. Finally, the practical increasing innovative capability in universities should develop learning orientation within the organization and stimulate innovative work behaviors by specifically developing transformational leadership within the organization.

Keywords— transformational Leadership; Innovative Capability; Learning Orientation, Innovative work behaviors

INTRODUCTION

To achieve the competitive advantage and enhancing the sustainable success of the organization in the 21th centuries, innovative capability has been considered a novel factor for discussion (Le & Lei, 2019). Some researchers proposed that innovative capability could enhance innovation in the organization (Suliyanto & Rahab, 2012; Tutar et al., 2015). Recently, some qualitative researches have been conducted to study the innovative capability in university in order to find out the factors that influence and accelerate innovation in universities (Ghardashi et al., 2019). Therefore, innovative capability is the key important factor involved in innovation in the organization and also in the university performance. In Thailand, there were 2,281,601 undergraduate students (National Statistical Office, 2015), since 2010s. This number has declined sharply according to

the national population. Recently, many universities across the country have been trying to find ways to maintain the number of students by not only opening many special courses but also opening international programs to increase the number of international students to replace the declining number of Thai students. Furthermore, the universities in the lower Northeast in Thailand enhanced their performance by reducing curriculum and creating new courses in response to the growing population of working age. Therefore, in the university context, both private and public, they have been trying to increase their innovative capability within the organization in order to survive and gain the competitive advantages.

According to previous studies, innovative capability has been studied mostly in the small and medium enterprise and the manufacturer organization (Donkor et al., 2018; Sulistiyani & Harwiki, 2016; Suliyanto, & Rahab, 2012) revealed some significant factors positively relate to innovative capability, which are type of leadership such as transformational leadership (Afsar et al., 2014), process factor such as learning orientation (Atitumpong & Badir, 2018; Calisir et al, 2013) and outcome such as innovative performance and financial performance (Tutar et al., 2015; Kittihunchotiwut, 2020). However, the key research gap of innovative capability is difficult to explain factors for gaining the sustainable innovative performance in long run (Pisano, 2015; Mendoza-Silva, 2021).

Firstly, type of leaders is also discussed for enhance innovative performance. Transformational leadership in perspective of theory, have a positive effect to a firm's innovation capability and performance (Bass, 1985; Avolio et al.,1999). However, there are still some arguments about the effective leaders who inspired the innovative performance and capability, such as leader member exchange (LMX) (Atitumpong & Badir, 2018) and transformational leadership (García-Morales et al., 2012; Schweitzer, 2014). In addition, the effect of transformational leadership on innovative capability has been discussed and the results still found mixed finding. (Iddris, 2016). Therefore, transformational leadership should be focused as a crucial factor to influence the innovative behavior of followers and also strong believed to increase innovative capability.

Secondly, recent researches of innovative capability, studied relationship of learning process for developing innovative capability by transfer knowledge to generate, promote and implement the idea for continuing innovation performance (Patky, 2020, Mendoza-Silva, 2021). This paper focuses on learning concept that believed in learning orientation, which will enhance both behavior and capability of innovation (Allameh & Khalilakbar, 2018; Atitumpong & Badir, 2018). The learning orientation is close to the learning process that link the vision of leader and defined as the influence of proactive learning process within the organization (Sinkula et al., 1997; Xie, 2019). Moreover, there are still need to confirm the causal effect relationship to confirm the role of transformational leadership to enhance innovative capability by mediating factors such as learning orientation (García-Morales et al., 2012; Xie, 2019) within the context of university (Nugroho et al., 2021).

In addition, this research examines and explores the conceptual model of the transformational leadership enhance innovative capability to bridge the theoretical gaps by using social cognitive theory (Bandura, 1997) to explain the learning orientation to explain self-competence which is essential part of innovative work behavior. Furthermore, innovative work behavior also has been studied in the behavior perspective for enhance the sustainable outcome of innovation performance (Koednok & Sungsanit, 2018). Moreover, a few researchers have mentioned that transformation leadership is discussed as the most important indicator of innovative work behavior (Asfar et al., 2014; Choi et al., 2016) and the empirical evidence to confirm the relationship transformational leadership and innovative capability are not enough (Choi et al., 2016; le & Lei, 2019).

Finally, to fill the gap of innovative capability in term of sustainable innovative performance,

this research is expected to provide better understanding by develop construct model of transformational leadership on innovative capability that has occurred through mediating concept of learning orientation and innovative work behavior. This research aims to expand the conceptual framework in the university because the knowledge of lecturers in university are the major asset in the new paradigm revolution of the economic value of higher education (Nugroho et al., 2021) as well as others important industry. Finally, this research is expected to extend and contribute to theoretical foundation of leadership theory and social cognitive theory and provides more understanding of factors that influence innovative capability in sustainable performance of individual and organization

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THE RESEARCH OBJECTIVES

The objectives of this research were to:

1. Explain and test effect of a structural model and confirm factors that influence the innovative capability of lecturers in university in north-east of Thailand.
2. Explore the impact which included direct and indirect effect of the transformational leadership on innovative capability through the mediating variables which include the learning orientation and innovative work behavior.

RESEARCH BOUNDARIES

The population of this study were the lecturers in universities in north-east of Thailand listed in the statistics of Office of the Higher Education Commission of Thailand (2017). They were identified as lecturers who have worked for at least 1 year. The sample size was 335 respondents selected by adopting a multi-stage random sampling technique. The research and data analysis were conducted from 26 August 2020- 26 August 2021.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Therefore, to answering the research gap of this research which is mentioned above, this paper aims to study for deeper understanding and acquire new knowledge of the relationship of transformational leadership that influence innovative capability and the mediating role of learning orientation and innovative work behavior. A review of the literature is summarized as follows;

Theoretical Foundation

This research combined 2 theories which are social cognitive theory and transformation leadership theory to explain the influences on innovative capability. Transformational leadership theory (TL) (Bass, 1990) explained a type of leadership that is full of energy, passion, and drive to inspire positive changes to their followers. Transformational leadership is well known and is discussed in a decade, especially in enhancing innovation and performance and also stimulate innovative work behavior. (Paulsen et al., 2013; Kesting et al., 2015; Northouse, 2016). Transformation leadership also creates the environment to support and to establish suitable environment for enhancing the desirable learning orientation (Park & Kim, 2018).

In addition, Social Cognitive Theory (SCT) is the theory to clarify the ability of an individual to perform desired behavior according to their beliefs and ability to plan, organize, and carry out activities by perceiving environmental events (Bandura, 1999). Individual or employees are characterized within this theory because they have developed their capacity from learning to expand their knowledge and competency for desired outcome and behavior (Hamid et al., 2020; Bandura, 1999). Social cognitive theory is applied for certain explanations in many academic research areas such as organizational behavior and organizational studies which involved learning orientation to understand certain mindset and the challenge to acquire new skills knowledges and abilities to be able to perform the desirable outcome (Gong et al., 2009; Zhang et al., 2012).

Therefore, from SCT, will summarize that learning orientation will enhance the desire behavior, especially innovative work behavior within the organization (Atitumpong & Badir, 2018). To bridge those 2 theories which are TL and SCT to provide the better understanding in innovative capability, this research propose model to explore the effect of transformational leadership on innovative capability and the mediating effect of learning orientation and innovative work behavior.

Linkage of Transformational Leadership and Learning Orientation.

For a decade, researcher argued that transformational leadership is a unique kind of leadership style which is effectively foster an innovation (Paulsen et al., 2013; Kesting et al., 2015).

there are some past researches explored learning orientation is the antecedent variable as same as transformational leadership, which effect to the innovation (Kharabsheh, Ensour, & Bogolybov, 2017; Liao, et al., 2017). However, recent research, there was some research found the significant positive effect of learning orientation as the mediator variable of transformational leadership and innovativeness and financial performance (Kittihunchotiwut, 2020).

Transformational Leadership theory is an expansion of transactional behavior, Bass (1985, 1990) developed the conceptual of Transactional and transformational leadership. Transformational leader was defined as a leader who can inspires and motivates the followers to behave for the challenge goal or beyond their expectation (Bass 1985; Bass & Riggio, 2006). Transformational leaders are the unique leaders who not only have potential to stimulate the interests of followers and create acceptance of the supreme goal of the group and individual but also increase their followers' abilities for achieving organization success (Mohamed et al., 2020; Demir et al., 2019). Transformational leadership embodies four dimensions; therefore, this study constructs transformational leadership in 4 components which are intellectual stimulation (ability of leader to stimulate follower), individualized consideration (ability of leader to understand the individual difference), idealized influence (capability of leader to influence others), and inspirational motivation (Bass, 1985; Avolio et al.,1999; Bass & Riggio, 2006; Jain, 2015). The first component is Intellectual stimulation defined as the characteristics of transformational leaders to encourage and stimulate followers to find the way for problem solving, and to encourage the capability of employees. Individualized consideration is the capability of transformational leader for discovering employees' needs, leading, coaching and supervising employees. Idealized influence refers transformational leaders' ability in sharing and distributing a powerful vision and mission for employee and ability to create and receive trust and support from employees (Bass & Riggio, 2006). Transformational leadership create the inspiration and motivation by providing or exchanging information for achieving expectations, to foster the capacities, and explaining key objectives or results in ordinary pattern to success beyond standard. (Bass, 1985; Bass, 1990; Avolio et al.,1999; Bass & Riggio, 2006; Jain, 2015).

Vera & Crossan (2004) proposed that transformational leadership would provide feedback of employees' learning for established learning organization. Some scholars proposed that knowledge sharing is an important key factor involving an innovative within organization, but the antecedents that encourage mediating factor such as learning orientation as a mediator variable in the relationship between transformational leadership and innovative capability are rarely deeply understood and studied (Choi et al., 2016). For explanation in learning orientation, social cognitive theory is primarily to highlight learning orientations to focus on the learning that occurs in the social context as a set of value, to be enhanced and extended their knowledge for promoting learning as a competency in the organization (Lonial & Carter, 2015). Moreover, Liao et al. (2017) suggested that transformational leadership is the most powerful type of leader which influences the innovative performance.

Therefore, it can be concluded by hypothesis (1) that:

Hypothesis 1: "Transformational Leadership positively influence learning orientation."

Linkage of Transformational Leadership and Innovative Work Behavior.

Previous researchers have been studied transformational leadership as a crucial antecedent factor to influence employee's innovative behavior and performance (Afsar et al., 2014; Thomson et al., 2021). According to the theoretical perspective and past research, transformational leadership is known that is the most effective leadership style to inspire and promote creative and innovative behavior among employees. (Thomson et al., 2021; Choi et al., 2016).

Moreover, for the decade, the most important factor that increases the innovative work behavior is the relationship between leader and employees (Tastan & Davoudi, 2015). Innovative work behavior is the set of behaviors for creating and introducing new ideas of individual, group or organization for applying new ideas for benefits organizational performance (West & Far,1989; Tastan & Davoudi, 2015; Choi et al., 2016). According to West & Far (1989) and Janssen (2000), innovative work behavior is defined as an employee's behavior in 3 directions. First, the generation state, is the state to generate the new ideas among employees for problem solving. Second, the application state which is the state that employees attempt to propose and apply their new ideas. Third, the implementation state is the state for implementing new ideas, products, processes, and methods to develop their work, positions and departmental units, or organizations (Koednok & Sungsanit (2018). Previous researches supported that the characteristic of transformational leadership will influence employees to be more productive and generate their innovative work behavior (Afsar et al., 2014; Choi et al., 2016; Thomson et al., 2021) to achieve the organization's supreme goal. Therefore, it can be concluded by hypothesis (2) that:

Hypothesis 2: "Transformational Leadership positively influences innovative work behavior."

Linkage of Learning Orientation and Innovative Work Behavior

Learning theory is confirmed and is discussed in various areas. A number of articles studied the organizational learning and the impact of learning on innovation and performance. (Chikweche & Bressan, 2018). In addition, the pervious studied imply the linkage of learning organization and learning orientation. Learning orientation is the antecedent for organization to create the learning capability which would impact to innovative work behavior or innovation performance. Some scholars proposed that learning orientation involves the individual development by acquiring the new skills and knowledges in the organization (Cohen & Sproull, 1996; Vera & Crossan, 2004; Atitumpong & Badir 2018). Learning orientation, is the key important factor to promote creativity and innovation because it is one of the most important strategies of the organization (Farrell, 2000 Runhaar et al., 2016). Based on the literature review, scholars stated that learning orientation has 3 dimensions. First dimension, commitment to learning, is the capability of organization to support of learning activity, as well as the ability to facilitate the climate of learning and ability to share the knowledge in the organization. Second dimension, shared vision is the ability of the organization to influence the individual effort in the same direction which concentrate a positive way of sharing the knowledge base to develop the capability of the organization for achieving the vision and goal. Last dimension, open-mindedness, is essential to increase learning through belief and prior action in common activities and open to accepting novel ideas and collaborative promote innovative in the organization (Sinkula et al., 1997; Baker & Sinkula, 1999). Moreover, previous researches confirmed that learning orientation supports the new ideas and innovative work behavior by social cognitive

theory, which explains a people who have strong learning orientation have perceived their abilities to overcome the challenge and obstacle and also apply their new knowledges and skills to improve innovative performance (Bandura, 1999; Runhaar et al., 2016). Therefore, learning orientation is believed to promote innovative work behaviors by apply the knowledge for improve and enhance creativity skills and ability of employee to generate solution for new implementation (Atitumpong & Badir 2018; Runhaar et al., 2016). Recently research, found that learning orientation should have a significant positive effect on innovative work behavior because learning orientation encourages people to have more effort for seeking for new skills and knowledges and apply their knowledge for improve their performance and seeking the different solutions for their implementation (Chikweche & Bressan, 2018; Atitumpong & Badir 2018). Thus, it can be hypothesized that,

Hypothesis 3: "Learning orientation positively influences innovative work behavior."

The relationship of Learning Orientation to innovative work behavior and Innovative Capability.

Innovation capability was defined as the ability of organization to transfer knowledge and apply new ideas to enhance product and process to meet the market's need (Lawson & Samson, 2001; Tutar et al., 2015; le & Lei, 2019) or the internal driving force for exploring and experimenting new ideas and solutions to create potential opportunity (Assink, 2006). Innovative capability is based on resource-based theory which consists of two important elements, namely resources (Resource) and capabilities (Capabilities) (Barney, 1991). The resource is divided into 2 main types, which are tangible resources and intangible resources. The potential is considered as an invisible asset, which can create a competitive advantage for the organization (Itami, 1987). However, there are not enough researches studying on innovative capability in the dimension of social cognitive theory, so the empirical data is still needed for more clarification. According to literature review and the context of universities, this research synthesized innovation capability measurement into 3 dimensions which are marketing capability, organization capability and strategic capability (Wang & Ahmed 2004; Lin & Cheng, 2007; Yudof & Abu-Jarad, 2011). In a decade, scholars have been discussed that learning orientation is another factor that affects to stimulate on the innovative behavior and also have a positive effect on innovation capability (Rhee et al., 2010; Suliyanto & Rahab, 2012; Kiziloglu, 2015). However, there are limited empirical researches confirm the impact of both learning orientation and innovative work behavior on innovation capability. According to social cognitive theory and to fill the research gap that is addressed above, this research aims to explore the mediating effect of learning orientation and innovative work behavior role in the relationship between transformational leadership and innovative capability. Therefore, it can be concluded by hypothesis that:

Hypothesis 4: "Learning orientation positively influences innovative capability."

Hypothesis 5: "Innovative work behavior positively influence innovative capability."

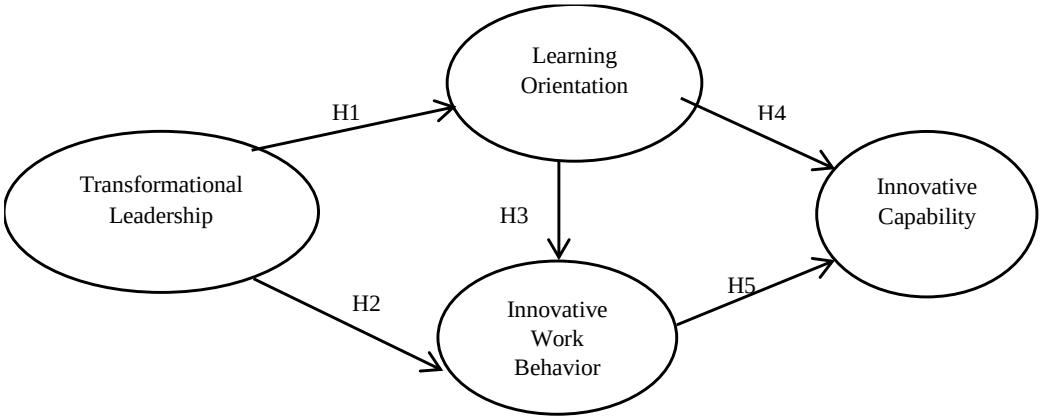


Figure 1: Conceptual Model

METHODOLOGY

This research employed a quantitative methodology by using a research survey. Questionnaire was an instrument for collecting data. The data was gathered from population who were member of the list of universities in the lower northeastern region in Thailand. There were 3,348 lecturers in 8 universities in the lower northeastern region in Thailand (Office of the Higher Education Commission of Thailand, 2017). The sample size was based on the adequacy of respondents according to multivariate criteria which required that the number of respondents should be ten times the number of the observed variable (Klein, 2011) thus, at least 260 respondents were needed for analysis. For the present research, 335 samples were gathered by using probability sampling and employed a multi-stage random sampling procedure. The research tool used was a questionnaire which was divided into 5 parts. Part 1 contains general information of the respondents. Closed-ended questions were developed using a nominal and ordinal scale. For parts 2-5, the questionnaire in this study contained 48 items, the questions were represented with a 7-point interval scale. The content validity was approved by 3 professional experts and the index of item objective congruence (IOC) was found to be at least 0.5 (Rovinelli & Hambleton, 1977).

Table 1: Reliability for each measurement.

Variables	**Components**	**Cronbach's Alpha Coefficient (n=30)**	**Cronbach's Alpha Coefficient (n=335)**
Transformational Leadership (adapt from Bass, B.M. & Avolio, B.J. (Eds.), 1994; Avolio, Bass, & Jung,1999)	4	.95	.97
Learning Organization (adapt from Sinkula et al., 1997; Baker & Sinkula, 1999)	3	.87	.92
Innovative work behavior (adapt from Janssen, 2000; Koednok & Sungsanit, 2018)	3	.85	.94
Innovative Capability (adapt from Wang & Ahmed 2004, Lin & Cheng, 2007, Yudof & Abu-Jarad, 2011)	3	.93	.97

Table 1 shows the reliability which was tested with a value of at least 0.70 (Hair et al., 2010). This questionnaire has 0.92 – 0.97 reliability results, that was more than 0.70. Therefore, this questionnaire has high reliability.

Descriptive

RESULTS AND DISCUSSION

Table 2: Respondent demographic and departmental information (N=335)

Demographic	N (335)	%
Gender		
Male	167	49.9
Female	168	50.1
Age (years)		
26-30	17	5.1
31-35	52	15.5
36-40	128	38.2
41-45	98	29.3
46-50	29	8.7
>50	11	3.3
Education		
Master Degree	169	50.4
Doctoral Degree	164	49.0
Post-Doctoral Degree	2	0.6
Work Experience (years)		
1-5	51	15.3
5-9	200	59.7
> 9	84	25.0
Position		
Lecturer	261	77.9
Head of Program	34	10.1
Vice Dean	24	7.2
Dean	16	4.8
Academics Rank		
Lecturer	172	51.3
Assistant professor Dr.	142	42.4
Associate Professor Dr.	21	6.3
Faculty		
Business Administration	46	13.7
Engineering	49	14.6
Technology and Industry	13	3.9
Humanity and Social science	57	17
Management	33	9.9
Science	51	15.2

Table 2: Respondent demographic and departmental information (N=335) (continue)

Demographic	**N (335)**	**%**
Art	25	7.5
Nurse and Health care	13	3.9
Education	22	6.6
Others	26	7.8
University		
Suranaree University of Technology	46	13.7
Ubon Ratchathani University	60	17.9
Nakhonrachasima Rajabhat university	64	19.1
Chaiyaphum Rajabhat university	20	6.0
Buriram Rajabhat university	30	9.0
Surindra Rajabhat university	23	6.9
Rajamangala University of technology Isan	53	15.8
Vongchavalitkul University	39	11.6

Table 2 shows that most of the respondents were female 168 persons (50.1 percent), of which 128 persons (38.2 percent) were between 36-40 years of age, 169 person (50.4 percent) have master's degree, and have work experiences between 7-9 years (43.3 percent). The largest group of respondents were lecturers (51.3 percent) and mostly respondents were from the Humanity and Social science (17 percent). The highest respondents were lecturers (19.1 percent) from Nakhonratchasima Rajabhat university.

Table 3: Descriptive Statistics of observe variables and Correlation

	Mean	**SD**	**TL1**	**TL2**	**TL3**	**TL4**	**Lo1**	**Lo2**	**Lo3**	**Iwb1**	**Iwb2**	**Iwb3**	**Ic1**	**Ic2**	**Ic3**
TL1	5.52	0.88	1												
TL2	5.34	0.94	.83**	1											
TL3	5.43	0.93	.72**	.80**	1										
TL4	5.46	0.99	.63**	.77**	.81**	1									
Lo1	5.84	0.99	.56**	.59**	.58**	.55**	1								
Lo2	5.56	0.98	.51**	.52**	.57**	.57**	.75**	1							
Lo3	5.53	0.99	.42**	.49**	.52**	.54**	.57**	.65**	1						
Iwb1	5.84	0.91	.40**	.43**	.42**	.45**	.53**	.52**	.52**	1					
Iwb2	5.41	1.10	.47**	.51**	.55**	.56**	.53**	.69**	.58**	.66**	1				
Iwb3	5.64	0.99	.41**	.48**	.50**	.53**	.52**	.61**	.49**	.76**	.81**	1			
Ic1	5.77	0.99	.43**	.47**	.47**	.49**	.60**	.66**	.59**	.65**	.67**	.70**	1		
Ic2	5.66	0.98	.44**	.48**	.46**	.48**	.58**	.66**	.58**	.59**	.62**	.69**	.83**	1	
Ic3	5.91	0.96	.40**	.48**	.44**	.50**	.63**	.66**	.57**	.59**	.62**	.69**	.75**	.80**	1

Notes. **p < .01

From table 3, The mean of all variables was moderate to high (between 5.34 and 5.91), while the standard deviation was moderate to high (between 0.88 and 1.10). For transformational leadership the total means was 5.44(SD=0.85), learning orientation total mean was 5.64(SD=0.87), Innovative work behavior total mean was 5.63(SD=0.90), and innovative capability 5.78 was (SD=0.91). The correlation among observed variable for transformational leadership, learning orientation, innovative work behavior and innovative capability was between 0.40 and 0.83 which did not exceed 0.85 which was statistically acceptable (Field,

2005). Following these correlations results from table 3, there were no multicollinearity in the data, therefore data was analyzed according to the structural equation model.

Measurement Model of this research

For the measurement model was adopt the confirmatory factor analysis (CFA) was adopted by using Mplus 7.2 software program, the model fit with empirical data was examined by the criteria of $\chi 2$/df less than 3 (Hair et al., 2010) or less than 5 (Schumacker & Lomax, 2004), the goodness of fit (CFI/TLI) ≥ 0.90 (Hair et al., 2010), and the root mean square error of approximation (RMSEA/SRMR) < 0.05 (Hair et al., 2010) or ≤ 0.08 (Hu & Bentler, 1995). The validity was measured by using convergent validity. Convergent validity was considered good for one indicator consists of factor loadings, composite reliability (CR) when it was equal to 0.7 and above it and average variance extracted (AVE) was acceptable at more than 0.5 (Hair et al., 2010). Composite Reliability value 0.7 and above was considered satisfactory. The AVE were greater than 0.5 criteria (Hair et al., 2010). The results were shown in Table 4.

Table 4: CFA and Validity

Variables	Indicator	Factor loading	Validity
Transformational leadership	Inspirational motivation	0.88*	C.R. = 0.96
	Idealized influence	0.95*	AVE. = 0.86
	Individual consideration	0.94*	
	Intellectual stimulation	0.93*	
***χ2*/df = 0.79, CFI = 1.00, TLI = 1.00, RMSEA = 0.00, SRMR = 0.00**			
Learning Orientation	Commitment to learning	0.81*	Composite Reliability = 0.87
	Shared Vision	0.95*	AVE= 0.69
	Open Mindedness	0.70*	
***χ2*/df = 1.23, CFI = 1.00, TLI = 0.99, RMSEA = 0.03, SRMR = 0.01**			
Innovative Work Behavior	Idea Generation	0.77*	Composite Reliability = 0.89
	Idea Promotion	0.81*	AVE= 0.74
	Idea realization	0.99*	
***χ2*/df = 1.59, CFI = 0.99, TLI = 0.99, RMSEA = 0.04, SRMR = 0.01**			
Innovative Capability	Marketing Capability	0.87*	Construct Reliability = 0.95
	Organization capability	0.96*	AVE= 0.86
	Strategic Capability	0.96*	
***χ2*/df = 1.43, CFI = 1.00, TLI = 0.99, RMSEA = 0.04, SRMR = 0.00**			

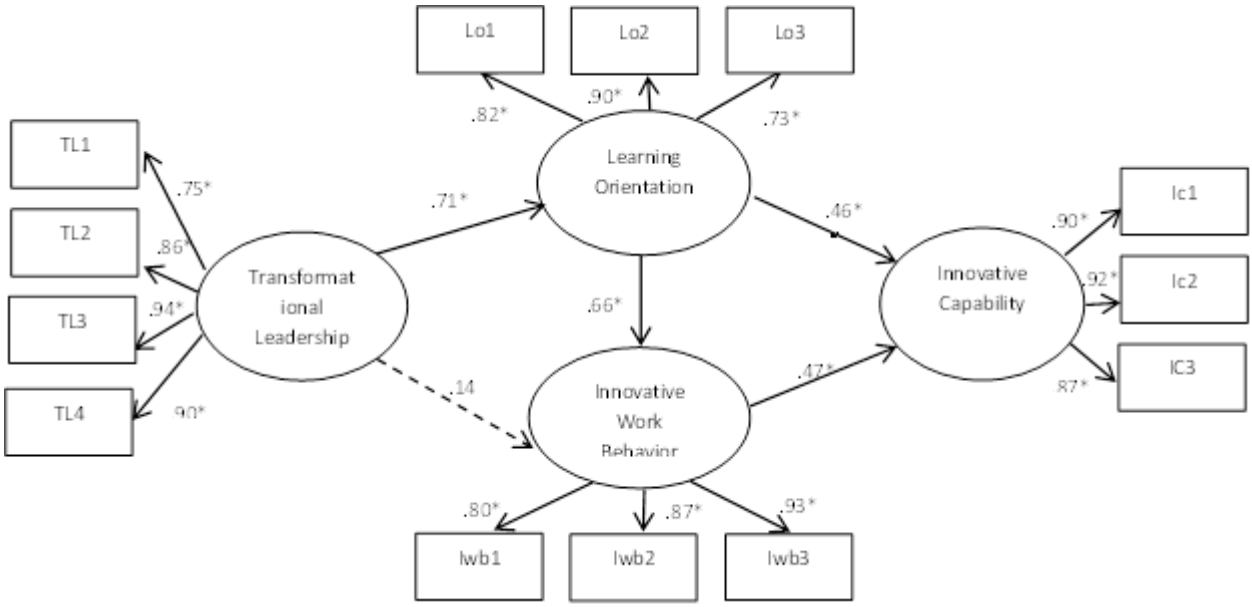
Notes. * p < .01;

Table 4, the findings show that the construct of Transformational leadership fit with the empirical data by revealing $\chi 2$/df = 0.79, CFI = 1.00, TLI = 1.00, RMSEA = 0.00, and SRMR = 0.00. The factor loading of the first component was examined to 4 observed variables, namely, Inspirational motivation (0.88), Idealized influence (0.95), Individual consideration (0.94), and Intellectual stimulation (0.93). The factor loading of the first component was between 0.88 and 0.95. The construct reliability was 0.96 and Average Variance Extraction (AVE) was 0.86. Secondly, the construct of learning orientation fit with the empirical data by revealing $\chi 2$/df = 1.23, CFI = 1.00, TLI = 0.99, RMSEA = 0.04, and SRMR = 0.01. The factor loading of the first component was examined to 3 observed variables, namely, Commitment to learning (0.81), Shared Vision (0.95), and open mindedness (0.70). The factor loading of the second component was between 0.70 and 0.95. The construct reliability was 0.87 and Average Variance Extraction (AVE) was 0.69. Thirdly, the construct of innovative work behavior fit with the empirical data by revealing $\chi 2$/df = 1.59, CFI = 0.99, TLI = 0.99, RMSEA = 0.04, and SRMR = 0.01. The factor loading of the first component was examined to

3 observed variables, namely, Idea Generation (0.77), Idea Promotion (0.81) and Idea realization (0.99). The factor loading of the first component was between 0.77 and 0.99. The construct reliability was 0.89 and Average Variance Extraction (AVE) was 0.74. Lastly, the construct of innovative capability fit with the empirical data by revealing $\chi 2/df = 1.43$, CFI = 1.00, TLI = 0.99, RMSEA = 0.04, and SRMR = 0.00. The factor loading of the first component was examined to 3 observed variables, namely, Marketing Capability (0.87), Organization capability (0.96) and Strategic Capability (0.96). The factor loading of the first component was between 0.87 and 0.96. The construct reliability was 0.95 and Average Variance Extraction (AVE) was 0.86.

Structural Model

The structural model showed the construct relationship of transformational leadership on innovative capability and the mediation variable were learning orientation and innovative work behavior. According to the data analysis, the structural model of transformational leadership on innovative Capability, the results of model fit the empirical data under the condition of $\chi 2 = 159.74$, df = 60, p-value = 0.000, $(\chi 2/df) = 2.66$ less than 3, CFI = 0.96 and TLI = 0.95 exceeded 0.9, RMSEA = 0.07 and RMSEA less than 0.08 (MacCallum et al, 1996; Hu and Bentler, 1995), and SRMR = 0.04 less than 0.05 (Hair et al., 2010). This meant that the structural equation models were correspondent with the empirical data.



Notes. *p < .01

Figure 2: The results of conceptual Model.

From figure 2, the results showed that transformational leadership had a direct effect on learning orientation ($\beta = 0.71$, $p < 0.01$). This meant that transformational leadership increase learning orientation to a high level. Additionally, learning orientation had a direct effect on innovative work behavior ($\beta = 0.66$, $p < 0.01$) and innovative capability ($\beta = 0.46$, $p < 0.01$). Therefore, transformational leadership had no direct effect on innovative work behavior and innovative capability, but transformational leadership had indirect effect to innovative work behavior and innovative capability through learning orientation. It can be summarized that learning orientation was the full mediator of transformational leadership. Moreover, innovation work behavior had a direct effect on innovative capability ($\beta = 0.47$, $p < 0.01$). It can be concluded that learning orientation had direct effect and in direct effect to innovative capability through innovation work behavior. Finally, the analysis showed that H1, H3, H4 and H5 were accepted, but H2 were not, as shown in Figure 2 and Table 5.

Table 5: Results for the hypotheses

Hypothesis	Estimate (β)	R^2	Hypotheses test
H_1: Transformational leadership → Learning Orientation	.71**	0.50	Accepted
H_2: Transformational leadership → Innovative Work Behavior	.14		Not Accepted
H_3: Learning Orientation → Innovative Work Behavior	.66**	0.59	Accepted
H_4: Learning Orientation → Innovative Capability	.46**		Accepted
H_5: Innovative Work Behavior → Innovative Capability	.47**	0.76	Accepted

Notes. ** p < .01

DISCUSSION

The research results have various confirmation for clarify our understanding of transformational leadership and innovative capability. Firstly, the finding of this research, transformational leadership had only indirect effect to innovative capability as research confirmed H1, transformational Leadership positively influence learning orientation. Similarly with previous studies implied the mediating factors between leadership and innovative performance (Tutar et al., 2015) such as flexible role orientation variable (Parker et al., 2006), and learning orientation (Afsar et al., 2014; Atitumpong & Badir, 2018; Kittihunchotiwut, 2020).

However, from the result of this research in H2, it was found that the hypothesis was not accepted as the significant effect of the transformational leadership on innovative work behaviour. It was found that there was small positive effect on relationship but not significant between transformational leadership and innovative work behaviour. Therefore, there were mixed findings about the significant effect of transformational leadership and innovative behaviour (Eisenbeiß & Boerner 2013; Bednall et al., 2018). Some studies reported the positive relationship (Gong et al., 2009; Afsar et al., 2014; Choi et al., 2016). However, there were some studies didn't find the direct effect and found the indirect effect between transformational leadership and innovative behaviour (Wang & Rode, 2010; Sharifirad, 2013; Bednall et al., 2018).

Secondly, the results of H3, was confirmed that learning orientation had a positive effect to innovative work behavior as same as Mutonyi et al. (2020) who supported that the fresh look of the important relationship between individual learning orientation and innovative work behaviour. Moreover, according to the social cognitive theory (Bandura, 1997) explain that when persons have been learned by observing their leaders or colleges, they will process the new behaviour. Therefore, when followers are influenced to have learning orientation by transformational leader, follower will change their mindset to acquire new knowledges and skills for innovative performance (Hamid, 2020; Zhang et al, 2012; Atitumpong & Badir 2018; Patky, 2020).

Next, innovative capability is influenced by both learning orientation and innovative work behavior as the result in H4 and H5. From H4, is confirmed that learning orientation positively influenced innovative capability. This research has been contributed to pervious research to confirm a positive impact of transformational leadership on learning orientation. (Rhee et al., 2010; Suliyanto & Rahab, 2012; Kiziloglu, 2015). And H5, is accepted that Innovative work behavior positively influenced innovative capability similarity as the recent research showed that Innovative work behavior was positively associated with organizational performance in Malaysian companies (Shanker et al., 2017).

Finally, according to the research results, the structural model of transformational leadership on innovative capability and the mediating role of learning orientation and innovative work behaviour, the model fit the

empirical data. The results were congruent with recent studies; therefore, transformational leadership should be the antecedent factor to influence the innovation capability but not impact directly to innovative capability (Lei et al., 2020; Azizah et al., 2021) and the R^2 was 0.76. that can be concluded that the structural model can explained the total effect was 76%. The research results were congruent with the novel research. Some research showed that impact of trust and knowledge sharing impact on innovative work behavior, which is not only congruence the important factor for innovative work behavior and learning process, but also implies to antecedent variable that create trust in the organization (Kmieciak, 2021).

CONCLUSION

This research proposed constructed model based on social cognitive theory and transformational leadership theory. The objectives of this study were to develop and validate a theoretical model to understand the effect that transformational leadership and innovative capability and the mediating effect of learning orientation and innovative behavior. The results, showed that the model fit the empirical data, it is theorized that when transformational leader behavior is higher in organization, the innovative capability trend to be high. Therefore, it is concluded that for creating the sustaining innovative capability, Leaders should provide and inspire their followers to have the learning orientation for maintain the innovation within the organization.

This study provided the important information that transformational leadership is not lead directly to innovative work behavior and innovative capability. The results showed that transformational leadership have an indirect effect to innovative work behavior through the important mediator which is learning orientation. Moreover, the results showed that learning orientation have positive significant effect to innovative work behavior and innovative capability (Kiziloglu, 2015; Patky, 2020; Mendoza-Silva, 2021). For more clarify understanding, it can be explained by the combination explanations of transformational leadership and social cognitive theory, which implied that when transformational leaders want to create the innovative work behavior in the organization, especially expected outcome is the sustainable innovative capability in long run, transformational leaders should try to develop learning orientation which will encourage the followers to acquire new skills and knowledge to continue develop their innovative work behavior for achieving supreme goal. which can be concluded that, innovative capability or innovative performance are difficult to sustain the outcome without enhance both learning orientation and innovative work behavior of the employees.

Finally, it can be summarized that only transformational leadership theory is not enough to explain and confirm the direct effect to innovative work behavior and innovative capability. Social cognitive theory would provide better understanding and contribute for learning and develop individual by not only learn from their leaders, colleges and environments and but also create self-efficacy for sustainable innovative work behavior and innovative capability in long run. Then, it can be concluded that in the context of university, the innovative capability become one of the key success factors to promote marketing capability organization capability and strategic capability. The implications of the above findings in relation for universities to have innovative capability is how to train leaders in each department to be a transformational leadership who can create the innovative environment through learning orientation that will enhance innovative work behavior and innovative capability within the organization.

LIMITATIONS AND FUTURE RESEARCH

The future research should explore and find another important variable that impact the innovative capability such as human resource management, strategic orientations on innovation capability or investigate about the influence of innovative capability towards the organization like innovation performance, competitive advantage and sustainable

competitive advantage. Moreover, the multilevel analysis for transformational leadership and innovative behavior or innovative capability still novel and need for empirical data confirmation to clarify understanding.

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