

*Original Research*

# **Enhancing Innovation through Learning Organisation among the Multinationals in Malaysia: Mediating Role of Self Efficacy**

Sharmila K.N. Sethumadavan, Zubair Hassan<sup>1</sup>, Abdul Basit  
IUMW Business School, International University of Malaya-Wales,  
Kuala Lumpur, Malaysia

---

## **Abstract**

The aim of this research is to examine the impact of learning organization on innovation, mediated by the self-efficacy among Multinationals in Malaysia. This study builds on the conceptual framework and further analyses the important factors of learning organization in predicting individual innovation and self-efficacy through critical evaluation of associated theoretical models, literature study and empirical testing. Due to the respondents' proximity, availability and accessibility, this study has used non-probability convenience sampling technique. Data was collected using a Likert-Scale (1-5) questionnaire from 308 who were employed at Multinationals. The reliability and validity of the item construct was tested. A structural equation modelling was carried out to analyse the data via AMOSE 22. The findings indicated that learning organization has a positive significant influence on innovation and self-efficacy. However, the result showed that self-efficacy has no significant effect on innovation. The result showed that the mediating effect of self-efficacy on the relationship between learning organization and innovation was not significant. The overall conclusion is that innovation can be cultivated and enhanced through learning organisation. The theoretical contribution of this research is that learning organisation and self-efficacy are two key determinants of innovation. Practically, this research findings can be used to design training and development programs to enhance learning organisational culture among the employees which in turn engage themselves in innovative behaviour. Managers can also use this research findings to identify and deciding to allocate resource to enhance innovation through most critical aspects of learning organisation than all aspects.

**Keywords:** learning organisation, innovation, self-efficacy, Multinationals

---

---

<sup>1</sup> Corresponding author's email: [Zubai7@gmail.com](mailto:Zubai7@gmail.com)

## Introduction

Learning Organisation would enhance innovation within an organization whilst increasing its sustainable competitive advantage. Thus the both are invariably connected. The purpose of this research is to evaluate the impact of learning organisation on innovation, mediated by the self-efficacy among the multi-national corporation's staff members in Malaysia.

In the era of Industry 4.0 with changes taking place at neck break speed – the impact felt at all stages of the industry value chain, and these being pressured by the innovation and the capability of companies who are competing to be first to market. Industry 4.0 and the advancement of technology covers, areas like big data; for the use of information in decision making, augmented reality – where real images are used recognise products in a particular setting; internet of things- where physical objects could be connected for various reasons (Bal & Erkan, 2019); learning Organisation is a requirement than a just a response to mere changes in the business environment. Competitiveness within an industry has become a rat race whilst to remain competitive a firm could use models developed by Porter; for example; five forces which would result in competitiveness of a firm (Tanwar, 2013). Thus in Porter's view competitive advantage can be achieved by learning about the industry and the development of the environment in particular industrial sector. That being true could only be partial to the industry and peering into the unknown means that companies are waiting for the industry reactions before changes can take place.

Competitive advantage, in fact, comes from the ability to learn faster than the competitors (De Geus, 1988; Odor, 2018). There is no doubt that a learning organization is an effective strategy for supporting and sustaining future competitive and performance of the organization (Senge, 1990; Mavondo, Chimhanzi & Stewart 2005; Amarakoon, Weerawardena & Verreynne, 2018). As seen in the dynamic change that industries and firms are undergoing what remain to be a challenge would be to manage innovation in order to gain this competitiveness; which in turn is supported by the learning organisation (Odor, 2018). Learning is a must and a necessity for any organisation that wants to survive in a highly competitive environment as it determines how a firm ties the continuous improvement to the environment that permits long-term survival (Montes, Moreno & Morales, 2005; Liao et al, 2017). Accordingly, multinationals strive to achieve competitive advantage through quality excellence, and to this end, it is crucial for the multinationals to adopt learning organization culture (Raj & Srivastava, 2016). This is because with the existence of learning in organizations, knowledge sharing behaviour would be promoted among the employees and retrieval of valuable information obtained from the organisational knowledge hub or meory (Figueiredo, Larsen & Hansen, 2020). Furthermore, as high performance and quality excellence involves innovative behaviour among the employees and also high self-efficacy, a learning organisation culture is seen essential in encouraging multinationals to exchange the innovative ideas with the right people, location, and at the right time (Hussein et al, 2016; Ladyshevsky & Taplin, 2018; Widyani et al, 2017).

The concept of learning organization has been increasingly gaining popularity and widely used in organisations around the world, particularly those who strive for survival

(Doyle & Johnson, 2019; Ellinger & Ellinger, 2020). It was strongly emphasised by practitioners and researchers that learning organization culture would enable organisations to achieve competitive advantage and allow to adapt to the changes quickly than competitors (Odor, 2018; Ziemiańczyk & Krakowiak-Bal, 2017). Fostering a learning organisation culture instill innovation to overcome chaotic and changing condition (Ziemiańczyk & Krakowiak-Bal, 2017; Delić, Slåtten, Milić, Marjanović & Vulanović, 2017; Rupčić, 2020). The Learning organisation culture or activities were found to have a positive organisational outcomes such as improved performance (Ordor, 2018; Tortorella, Fettermann, Miguel & Sawhney, 2020; Adam, Indradewa & Syah, 2020) and fostering innovative capabilities and innovative working behaviour among the employees (Hussein et al, 2016; Hassan & Basit, 2018; Martínez-Costa et al, 2018).

As such multinational's need to very critically consider how learning organisations can be constantly innovative mediated by self-efficacy. The capacities developed in learning organisation provide an opportunity for the integration of internal and external knowledge (Raj & Srivastava, 2016; Rezaei et al, 2018; Rupčić, 2020). This requires collective input and knowledge sharing (Raj et al, 2016; Rupčić, 2020). This is beneficial to the multinationals because it allows continuous improvement, adaptability and add value (Jaaron & Backhouse, 2017; Tortorella et al, 2020). Halim et al (2019) witnessed how learning organization has helped improving competitiveness and responsiveness, and eventually promoting and fostering innovation through learning. Many studies associate the learning concept to innovative behaviour of employees and organisational performance (Watkins, Marsick, Wofford, & Ellinger, 2018; Kim, Watkins & Lu, 2017). The ability to meet the challenging environment is closely associated with organisations in their learning capacity (Gomes & Wojahn, 2017).

Although researchers and practitioners attempted in producing evidence to establish the connection between learning organisation culture or activities with organisational innovativeness in terms of innovative work behaviour and innovative ideas, there were however still lack of empirical evidence within multinationals around the world, particularly in Malaysian context (Teng & Hasan, 2015; Hussein et al, 2016; Roffeei et al, 2017; Hassan & Basit, 2018; Halim et al, 2019). Also the empirical evidence that produced to shows how learning organisation enabled employee's innovative capability allows an improvement in the level of competitiveness is inconclusive (Hussein et al, 2016; Sung et al, 2016; Caputo, Garcia-Perez, Cillo & Giacosa, 2019). Furthermore, little emphasis has been paid to examine the effect of learning organisation on innovation in multinational that cover the whole aspect of learning organization culture (Doyle & Johnson, 2019; Halim et al, 2019; Figueiredo et al, 2020). The empirical evidence produced in the past regarding how learning organisation enhances self-efficacy of employees were weak and limited (Parsa et al, 2014; Ladyshevsky & Taplin, 2018; Newman et al, 2018; Song et al, 2018). The literature available on linking self-efficacy and innovative behavior of employees, particularly on multinational's employees are almost non-existed. Since self-efficacy was identified in the past literature as an important aspect that influences behaviour, motivation and attitude, the future demands to explore the mediating effect of self-efficacy on the relationship between learning organisation and innovation.

Thus, the study intends to look at: (1) effect of learning organisation on innovation, (2) effect of leaning organisation on self-efficacy, (3) effect of self-efficacy on innovation, (4) the mediating effect of self-efficacy on the causal relationship between learning organisation and innovation.

## Literature Review

The origin of learning organisation were initiated by Argyris (1973) single-loop and double-loop learning system. The most widely cited definition of learning is from Peter Senge (1990) who define learning organization as people expand their capacity to create results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together. A learning organisation defines points to the successful change adaptation through the learning initiatives and innovation. Pedler (1998) defines learning organisation as the complete participation of employees that results in collective changes in the organisation. Marsick and Watkins (2003) stated that a learning organization must capture, share and use knowledge so its members can work together to change the way the organisation responds to the challenges. Learning Organisation can be measured in many ways. Jain and Moreno (2015), discussed various types of performance measurements namely; teamwork, reward, autonomy and freedom, reward, recognition and many others.

The fifth discipline model of Senge (1990) builds on the foundation of five key disciplines that an organisation needs to have: personal mastery, mental models, shared vision, team learning, and system thinking. Senge (1990) explained in his argument how systems thinking integrates all five disciplines and ultimately empowers the learning organisations possible. Learning and development need to be made either wholly or individually and if this is not so, it may affect the operation efficiency long term (Armstrong, 2019). Even though Senge (1990)'s system thinking is considered as creative and visionary, the model is said to have a weakness because of changes in vision and leadership. Pedler and Burgoyne (2017) appropriated the learning organisation as a company that allows learning activity for all affiliates and the goal is to generate ongoing organizational transformation.

In the argument, a learning organization will not simply exist in the training process through innovative measures. Instead, a learning organization is cultivated by means of learning together at all levels as a company (Pedler & Burgoyne, 2017). The model presents characteristics of a learning organisation such as; it takes a learning approach to strategy, engage in participative policy making, uses information, practices formative accounting and control, values internal exchanges, rewards flexibility, fosters enabling structures, employs works as environmental scanners, engage in inter-company learning, foster a learning climate, supports self-development opportunities for all (Bierema, 1999). On the other hand Watkins and Marsick (2003) identified a total of six important elements including creating unceasing learning opportunities, encouraging review and discussion, inspiring collaboration and team learning, creating systems to capture learning and sharing, building common vision, and connecting the organization with its environment. However, an organisation's learning at all levels is given top priority, as opposed to the Senge (1990) model. The model proposed by Watkins and Marsick (2003) emphasised

on continuous learning and focus on cultivating creativity, productivity, and critical reflectivity. As such, all organisations value the human capital and that causes to create innovative workforce (Lenihan, McGuirk & Murphy, 2019). Therefore with any model that will posit using of tools of assessment and evaluation will in the long run impact a learning organisation in any sector or industry. The advantage of Senge(1990)'s model is that employees are part of a uniform formation of a common shared vision for the organisation. Schneider(2019) argued that such uniform formation of shared vision occur in a decentralised and democratic organisation that employee participation is an important element of growth. Schumpeter (1934) is one of the first to recognise the innovation process and its impact on economic development. He defined innovation as creating and implementing' new combinations' associated with new products, services, and processes of work or markets. In addition, for the first time within an organisation setting, Thompson (1965) defines innovation as the generation, acceptance and implementation of new processes, products or services. This definition acknowledges the process is a strategic effort and a multi-phase process. Innovation is correlated with adopting useful ideas and implementing ideas (Kanter, 1988).

An innovation aims to generate benefits-financial gains, personal growth, increased satisfaction and increased cohesiveness (King & Anderson, 2002). Early definitions were namely from economists; and then the focus shifted to technology and its evolutions (Edwards-Schachter, 2018) with much of the innovation being manufacturer based with R&D and normally was initiated by large companies; and Porter (1990) defined innovation as “*a new way of doing things (termed invention by some authors) that is commercialized*” (p. 780). Much further into the research of innovation; Mazzucato (2017), reviewed the need for “*mission-oriented*” innovation; and many of the models discussed by researcher like Fagerberg (2017) who posited policies that help mobilise innovation. The innovation as such should also revolve around social innovation than that of technology, R&D and product innovation.

The construct of self-efficacy was first introduced by a psychologist, Albert Bandura, who used social learning theory (later labeled as social cognitive theory) as a conceptual basis to analyse this construct (Bandura, 1977). According to Bandura (1986), the fundamental principle underlying self-efficacy theory is that personal mastery expectations and success determine whether an individual will engage in actions. People are motivated to perform at behaviors they believe will yield desired results. However, expectations of results are highly dependent on expectations of self-efficacy, and thus self-efficacy predicts performance healthier than expected results (Bandura, 1986). Self-efficacy is defined as personal belief concerning the measure of the motivation, cognitive manipulation as well as action characterisation to carry out an explicit assignment successfully (Bandura, 1997). He stated that an individual who beliefs in their own capability and are able to implement actions to produce results. Much research has been done on self-efficacy that was introduced by Bandura in his Social Cognitive Theory (SCT). Thus with higher sense of efficacy an individual will achieve higher levels of performance and remain task focused (Hsiao et al, 2011). Martocchio and Judge (1997), stated that, “*Self-efficacy represents the mechanism through which the generalised tendencies of conscientiousness manifest themselves*” (p. 766). According to Bandura, individuals with a high sense of self-efficacy belief are more likely to have higher levels of performance and higher commitment to tolerate frustration and to remain task-focused



when obstacles arise. According to Bandura (1977, 1986) individuals with a high sense of self-efficacy belief are more likely to have higher levels of performance and higher commitment to tolerate frustration and to remain task-focused when obstacles arise. Bandura (2006) also found that the result of higher self-efficacy is through persistent learning. It's about self-confidence towards own ability in accomplishing an uphill task beyond the perceived capability. The specific requirement on the task demanded by the organization will form the linkage to substantiate the conceptualization of self-efficacy. Self-efficacy literature found that the efficacy influences a person in many aspects, include goals, stamina, persistence under difficult challenges (Maurer, 2001; Anstiss, Meijen & Marcora, 2020).

### *Hypotheses Development*

The culture of innovation and creativity was found to have a strong effect on the development of the enterprises (Shih, 2018; Hoang, Wilson-Evered & Lockstone-Binney, 2019). Therefore, the present and future of nation and enterprise success are determined by the culture of innovation and creativity (Hanifah, Halim, Ahmad & Vafaei-Zadeh, 2019; Sutapa, Mulyana & Wasitowati, 2017). In a similar way Sutapa et al (2017) found that innovation enables to sustain long-term competitive advantage. Organisational learning is considered to be one of the dominant aspect of learning organisation where organisation's emphasis more on organisational learning was found to have a positive and significant effect on technical and administrative innovations (Rezaei, Allameh, & Ansari, 2018).

A study done on Korean firms showed that learning organisation activities such as continuous learning, establishing systems to capture innovativeness, shared learning for innovativeness, providing strategic leadership for innovation has a positive and significant effect on transfer of innovation and knowledge (Sung, Rhee & Yoon, 2016). Also transferring learning organisation activities has a mediating effect on the relationship between innovativeness and learning organization activities (Sung et al, 2016). A study done among the Multinationals in Spain found organisational learning mediates the external collaboration in innovation by enhancing acquiring, transferring and interpreting new knowledge to ensure development of innovation takes place successfully through employees (Martínez-Costa, Jiménez-Jiménez & Dine Rabeh, 2019). A study conducted in Malaysia found that learning organisation's aspects such as empowerment has positive and significant effect on innovation (Hassan & Basit, 2018). Also studies done on Malaysian context revealed that collaborative and team learning was highly correlated with organisational innovativeness (Hussein, Omar, Noordin & Ishak, 2016). Also a study done among the SME in Malaysia showed that dimensions of organisational learning such as information acquisition, behavioural and cognitive learning effects innovation culture (Halim, Ahmad, & Ramayah, 2019). Since most of the studies as illustrated in here discussed from organisational learning perspective, the hypothesis is formulated as follow

*H1: Learning organization has a positive significant impact on Innovation among the employees of multinationals in Malaysia*

Self-efficacy was defined by Bandura (2006) as self-interest where self-efficacy makes a difference in how people feel, think, behave, and motivate themselves. The research done to examine the learning organisation activities on self-efficacy of employees in the workplace, especially in multinationals in Malaysia are limited or non-existed. There were very few studies in the past done such as Eisenberger et al. (1986) and more recently Zhu, Law, Sun and Yang (2019) argued that learning organisation forms a supportive environment to increase self-efficacy. The few studies in early 2000 showed positive link between learning organisation and self-efficacy (Zhu et al, 2019; Maurer et al., 2002; Pati & Kumar, 2010). In Iran, one of the study conducted in 2016, showed that learning organisation has a positive and significant effect on self-efficacy (Parsa, Parsa & Parsa, 2016). Rather than learning organisation as a whole, organisational learning was tested and found that organisational learning mediates the self-efficacy elements such as employee behaviour (work engagement) and workload (Ladyshevsky & Taplin, 2018). Similarly a study done among the teachers in Korea showed that learning organisation culture effects the employee self-efficacy and work engagement causing high job performance (Song, Chai, Kim & Bae, 2018). More recently a study conducted in Wales, found that there was a positive relationship between learning organisation and both job satisfaction and responsiveness to employee needs to grow (Kools, Gouédard, George, Steijn, Bekkers, & Stoll, 2019). Studies especially done in Malaysian context were limited. Despite the importance of learning organisational practices such as continuous learning, embed systems, strategic leadership and empowerment on self-efficacy among the MNCs are less emphasised in Malaysia, the following hypothesis is formulated

*H2: Learning organization has a positive significant impact on Self-efficacy of employees among multinationals in Malaysia*

A learning organisation promotes employee self-efficacy, which in turn will enable innovation and sustain performance (Tierney et al, 2002). A study conducted among the employees working in education sector of Malaysia showed that self-efficacy has a positive and significant effect on the factors contributed to innovative work behaviour (Hsiao, Chang, Tu & Chen, 2011). Also it was found that employees with higher self-efficacy demonstrated a better work innovative behaviour (Hsiao et al, 2011). However, the effect of self-efficacy on innovative behaviour of employees were sufficiently not emphasised or explored (Ibus & Ismail, 2018). It was found that creative self-efficacy successfully moderates the relationship between innovation culture and employee creativity (Jaiswal & Dhar, 2015). Also it was found that the employees with highly creative-self-efficacy enables creative behaviour when workplace has a supportive innovation climate (Jaiswal & Dhar, 2015). It was also found that employees engage in innovative behaviour when work environment becomes more challenging and enhance innovation through learning organisation and employee self-efficacy (Riaz et al, 2018).

A study conducted among the employees working in Multinationals in China found that creative self-efficacy on innovative behaviour of employees are stronger when they work under stronger entrepreneurial leaders (Newman, Herman, Schwarz & Nielsen, 2018). A study done in Malaysia showed that self-efficacy for innovation was one of the key determinants of innovative culture and innovative culture positively and significantly effects innovative behaviour in educational setting (Roffeei, Kamarulzaman & Yusop, 2017). In contrast to this, Widyani, Sarmawa and Dewi, (2017) showed that the

relationship between self-efficacy and innovative behaviour were not significant. In view of the above, this highlights the need of this study to further evaluate the effect of self-efficacy towards innovative behaviour within the multinationals in Malaysian context. It is important emphasis on examining the effect of self-efficacy on innovation among the Multinationals, especially in Malaysia as there were only handful of studies carried out in education sector. Therefore the following hypothesis is formulated as follows

*H3: Self-Efficacy has appositive significant impact on Innovation of employees among multinationals in Malaysia*

The mediating effect of self-efficacy on the causal relationship between learning organisation and innovation not emphasised in the past, especially among the employees working in Multinationals. However mediating effect of self-efficacy was examine and its influence on the relationship between learning organisation and career advancement (Parsa et al, 2014). Parsa et al (2014) found that self-efficacy has a positive and significant mediating effect on the relationship between learning organisation and career advancement. Also later Parsa et al (2016) found that self-efficacy mediated the relationship between mentoring and career advancement. Furthermore, the mediating effect of self-efficacy on the relationship between personality and innovative work behaviour among the employees in academic sector was tested (Li, Liu, Liu & Wang, 2017). Similarly the mediating effect of self-efficacy on the relationship between person-organisation fit and innovative behaviour was assessed and found that higher person-organisation fit enhances the innovative self-efficacy and improves innovation in job task (Ma, Wang & Liu, 2016, June). Reference with the social cognitive theory, knowledge sharing is one aspect of learning organisation, where Hu and Zhao (2016) assessed the mediating impact of self-efficacy on the causal relationship between knowledge sharing behaviour and innovative behaviour among the employees in commercial setting in China and found that self-efficacy mediates the relations between knowledge sharing behaviour and innovativeness. Although there are several studies on the mediating effect of self-efficacy, empirical evidences on the mediating effect of self-efficacy on the causal relationship between learning organisation and innovation in commercial setting, especially among the employees of multinationals in Malaysian context remain limited and scarce. Therefore the following hypothesis is formulated as follows

*H4: Self Efficacy has a significant and positive mediating effect on the relationship between learning organization and innovation among the employees of multinational in Malaysia*



### *Conceptual Framework*

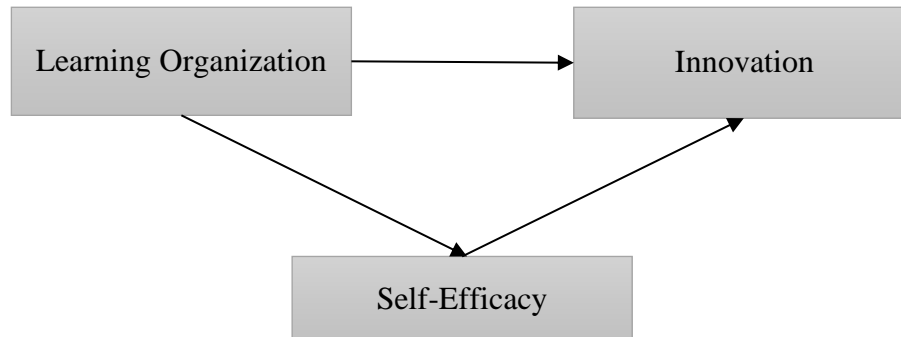


Figure 1: Conceptual Framework

### **Methodology**

#### *Respondent's Profile*

The target respondents in this research were employees working in multinationals in Malaysia. A total employees of 521 employees were selected to participate in this survey. 310 questionnaires were distributed using convenience sampling method and 308 valid responses were received from the participants. Two (2) respondents were found to produce erroneous answers by assigning to all the questions the same rating. The male and female ratio of 308 respondents is nearly equal (51.3: 48.7) and provides a balance of gender diversity that is believed to have an impact on the way people communicate and work together and on the performance of the firm (Leonardi & Contractor, 2018). 35.7 percent are between 31-40 and 31.1 percent between 41-50, indicating that most employees have substantial work experience with fluid cognitive skills (Salthouse, 2012) to mitigate the impact of learning and innovation. 62.4 percent of respondents have work experience of more than 10 years, while 22.4 percent of respondents more than 6 years and less than 10 years show that the length of experience has a relatively significant impact on job performance (Schmidt, Hunter & Outerbridge, 1986). In addition, 37.7 percent of respondents are at the managerial level, approximately 18 percent at the supervisory and technical level, and 14.6 percent at the operational level.

#### *Survey Instrument*

A five-point Likert-Rating scale questionnaire was used in this study. Each item included in the item construct requires each respondents to rate the items by selecting a value between one (1) to five (5) (1 –strongly disagree, 2-disagree, 3 neutral, 4-agree, 5 strongly agree) denoting at what extent respondents agree with the statement. The learning organisation variables were adopted from Dimensions of Learning Organisation Questionnaire (DLOQ) developed and validated by Watkins and Mersick (2003). In this research only eleven (11) items out of forty-two (42) items from the original questionnaire were adopted to measure learning organization. The original seven (7) factors (dimensions) with 42 items were considered too lengthy and did not fit the data very

well. Since this research was aimed at analysing the learning organisation as one key dimension rather the dividing into 7 dimensions, the proposed factor structure was adequate. Therefore, it was very crucial to identify a shorter version of the instrument (less items) while maintaining the same or better psychometric properties. In order to refine and shorten the instrument of learning organisation, those items adequately present the presumed variables of the learning organisation a series of confirmatory factor analysis (CFA) were conducted for the exploratory sample. The item deletion process was to retain a set of sample items which fairly represents all the seven (7) dimensions originally emphasised by Watkins and Mersick (2003). The final version of the instrument have only eleven (11) items to measure learning organisation. Five (5) items were used to measure innovation. This five (5) items was also adopted from the Watkins and Mersick (2003) as well and retained these items throughout the CFA analysis. Five(5) items were used to measure the self-efficacy which was adopted from Schwarzer and Jarusalem (1995).

Therefore the item construction used in this research included 21 items. Seven (7) questions were included to identify demographic profile of respondents such as gender, age, marital status, ethnicity, working experience, income and job position. Table 1 below illustrates on the development of the instrument in this research and its reliability and validity.

Table 1: Validity and Reliability of Items in Construct

Statements	CFA-Loading	AVE >0.5	Reliability >0.7
<b>Learning Organisation</b>			
In my organization employee's help each other to learn.	.719	.705	.916
In my organization employee are given time to support learning.	.755		
In my organization employee give open and honest feedback.	.704		
In my organization whenever employees stated their view, they also ask others opinion.	.705		
In my organization, teams/groups have the freedom to adopt their goals as needed.	.704		
In my organization, Teams/groups review their thinking as per the situation.	.715		
In my organization, Teams/groups are confident about the management that they will act as per the recommended strategies	.695		
My organization have the guides/learning material for the employees to improve.	.565		
My organization encourages employees to solve problems by discussion with each other.	.720		
My organization creates systems to measure gaps between current and expected performance.	.750		

Statements	CFA-Loading	AVE >0.5	Reliability >0.7
In my organization Leader mentor other group leaders for the better results.	.725		
Innovation			
In my organization a good suggestion from the employees are highly valued.	.732	.752	.868
In my organization are keen to introduce new products and services.	.737		
In my organization, Management invest money on R&D to support innovative initiatives.	.806		
In my organization, skilled employees are highly valued among the employees.	.757		
In my organization, top priority given to innovation for learning new skills to ensure continues improvement	.728		
Self-Efficacy			
If other employees opposes me, I can find the ways to get what I want.	.778	.735	.861
It is easy for me to stick to my goals and accomplish it.	.726		
I know how to handle unforeseen situations.	.709		
I can remain calm while facing difficulties.	.669		
When I am confronted with a problem, I can find a solution easily.	.796		

Source(s): Marsick and Watkins (2003); Schwarzer and Jarusalem (1995)

The validity of the final construct was established using convergent validity. Factor loadings and average variance extracted (AVE) were used to assess the convergent validity of the items in the construct. As shown in the Table 1 above, the loading values of each item exceeds the bench mark value of 0.5 (Hair et al, 1998), it was considered that items used to measure learning organisation, innovation and self-efficacy were convergent valid. Alternatively AVE for each dimension such as learning organisation, innovation and self-efficacy exceeds 0.5 as suggested by Hair et al (1998) with an AVE score of 0.705, 0.752 and 0.735 respectively. In terms of discriminant validity,

In order to measure the reliability of the scale, Cronbach's alpha values were used to measure the internal consistency of each items used in the item construct. As stated by Hair et al (1998), to retain the items, each item must score a value of 0.7 or Cronbach's alpha value must exceed 0.7. The items used to measure learning organisation, innovation and self-efficacy obtained a Cronbach's alpha values of 0.916, 0.868 and 0.861 respectively. Since all the values are above 0.5 suggesting that there is a high internal consistency among the items in the scale. Therefore all the items in the construct were retained and proceed with structural equation modelling (SEM).

## Results and Findings

The model fitness was assessed using CFA and SEM path analysis before proceeds with the causal effect of learning organisation and self-efficacy on innovation. The model validity and reliability was established and then proceeded with the SEM.

### *Confirmatory Factor Analysis Model*

Confirmatory Factor Analysis (CFA) is a statistical tool that examines how well the theoretical factor specification matches the actual data, tests the “measurement theory” to either confirm or reject the preconceived research theory, and ensures that the conceptual constructs of the measurement model are operationalized (Hair et. al. 1998). The CFA result showed that the overall model is fit as the p-value is 0.000 (less than 0.05), suggesting that the overall measurement (CFA) model was statistically significant. In terms of other fit indices such as RMSEA of the model is 0.080, which is below or equal to 0.08 suggesting the model is good fit model (Hair et al, 1998; MacCallum et. al. 1996). In terms of CFI the model has a value of 0.901 which is higher than 0.90 indicating the model is a good fit model (Hair et. al., 1998). In terms of normed chi-square the model is also a good fit model as the value of normed chi-square is 2.962 which was lower than 3 (Hair et al, 1998). The CFA model was shown in figure 2.

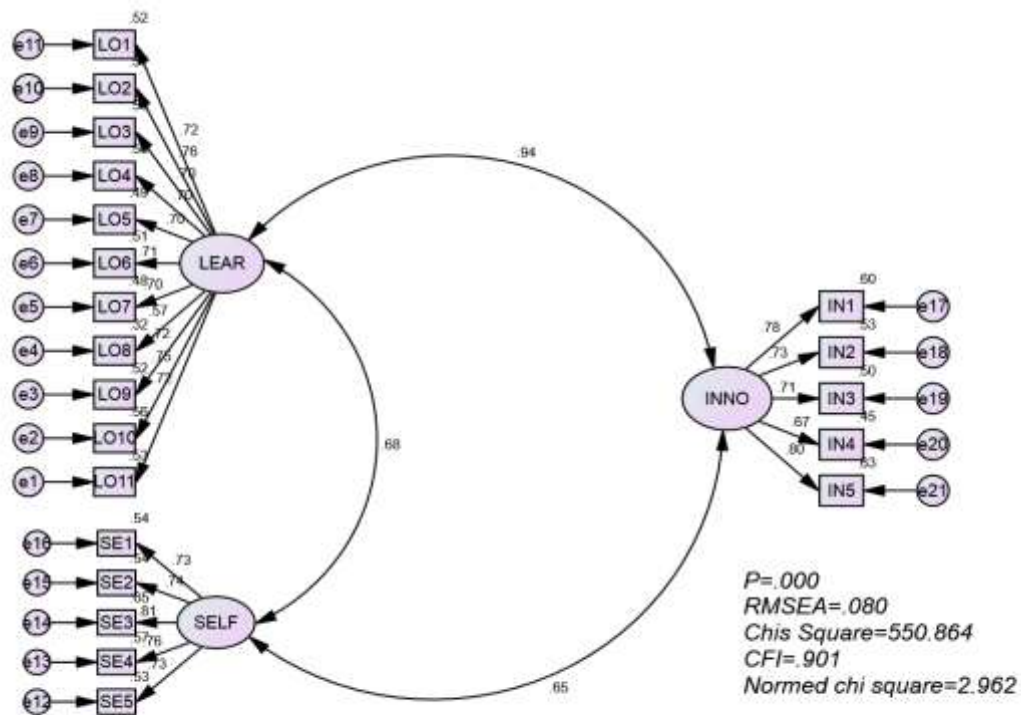


Figure 2. CFA-Measurement Model  
Source(s): AMOS output

### Structural Equal Models

Structural Equation Modeling (SEM) analyses structural relationships between observed latent variables. In this research three Structural Equation models were generated to investigate the impact of learning organization on innovation mediated by self- efficacy.

Table 2: Model Fitness Comparison

Recommended rules	CFA	SEM1	SEM2	SEM3	Result
P-value < 0.05	.000	.000	.000	.000	Fit
CFI > 0.90	.901	.901	.902	.901	Fit
RMSEA <0.08	0.080	0.080	0.080	0.080	Fit
Normed Chi square < 3.0	2.962	2.962	2.946	2.962	Fit

The SEM models fit indices in comparison with CFA-measurement model were exactly same suggesting that the SEM models were valid (Hair et al, 1998) to proceed with the SEM analysis to examine the causal impact of learning organisation on innovation and in analysing the mediating effect of self-efficacy.

Table 3: Path Analysis using SEM

Model 1: Impact of Learning Organization on Innovation through Self-efficacy					
Path	Estimate	S.E	C.R	P	Result
LEAR → SELF	.601	.064	9.389	.000	Positive Significant
SELF → INNO	.007	.065	.108	.914	Positive Insignificant
LEAR → INNO	.981	.088	11.149	.000	Positive Significant
Model 2: Impact of Learning organization and Self-efficacy on Innovation					
Path	Estimate	S.E	C.R	P	Result
LEAR → INNO	.981	.088	11.149	.000	Positive Significant
SELF → INNO	.007	.065	.108	.914	Positive Insignificant
Model 3: Impact of Learning organization on Self-efficacy and Innovation					
Path	Estimate	S.E	C.R	P	Result
LEAR → INNO	.986	.077	12.750	.000	Positive Significant
LEAR → SELF	.602	.064	9.443	.000	Positive Significant

The Model 1 shows that learning organisation has a significant and positive effect on self-efficacy with an estimate values 0.601 (p is 0.000). However the research found that self-efficacy do not have any significant effect on innovation with an estimate value of 0.007 with a significant value of 0.914 (p value is more than 0.05). However learning organisation was found to have a positive and significant effect on innovation with an estimate value of 0.981 with a significant value of 0.000 (p value is less than 0.05). This shows that learning organisation impacts on self-efficacy and self-efficacy effect Innovation. This means  $0.601 (p=0.000) \times 0.007 (p=0.914) = 0.0042$  is not significant. Since the direct effect of learning organisation on innovation was significant, and indirect



effect of learning organisation on innovation through self-efficacy was not significant, suggesting that self-efficacy is not a mediator.

Further analysis was carried out to confirm whether self-efficacy is a mediator in effecting the relationship between learning organisation and innovation. In the Model 2, learning organisation latent variables and self-efficacy latent variables were treated as independent factors effect innovation (dependent variable). The result was similar as Model 1, where learning organisation has a positive and significant effect with an estimate value of 0.981 ( $p=0.000$ ) while self-efficacy was found to have no significant effect with an estimate value of 0.007 ( $p=0.914$ ). To confirm further, innovation and self-efficacy and innovation were considered as dependent variable and learning organisation was considered as only independent variable in Model 3. It was found that learning organisation has a positive and significant effect on innovation with an estimate value of 0.986 ( $p=0.000$ ) and on self-efficacy with an estimate value 0.602 ( $p=0.000$ ).

Therefore it is confirmed in this research that self-efficacy do not have any significant effect on the causal relationship between learning organisation and innovation. Also it was confirmed that the learning organisation has positive and significant effect on innovation and self-efficacy.

## Discussion of Hypotheses

There were four hypotheses set in this research in literature review. Each of these hypothesis were established in this section. The three SEM model carried out in the result and fining section is incorporated to establish whether the result supported the hypotheses or not.

The first hypothesis was that learning organisation has a positive and significant effect on innovation. The result of this study supported the hypothesis through SEM based on three models. The three SEM also shows that learning organisation practices has a significant and positive effect on innovation. Therefore H1 was accepted. This is similar to the past research findings such as Rezaei et al (2018), Sung et al (2016), Martinez-Costa et al (2019), Hassan and Basit (2018) and Hussein et al (2016). The learning organisation instill innovation among the employees of multinationals through continuous learning (Sung et al, 2016).

Employees working in multinationals in Malaysia engage in collaborative learning as team effort and team leaders ensure innovation takes place successfully (Martinez-Costa et al, 2019; Hussein et al, 2016). Also these employees were empowered by the team leaders so that new knowledge and ideas were exchange between employees to foster innovations (Hassan & Basit, 2018). Also managers at multinational facilitate information acquisition and cognitive earning to cultivate innovative working behaviour among the employees (Halim et al, 2019).

The second hypothesis was that learning organisation has a positive and significant effect on self-efficacy. The SEM model 1 and 3, the effect of learning organisation on self-efficacy was established. In both models, it was found that learning organisation has positive and significant impact on self-efficacy. Therefore H2 was accepted. This is

similar to the previous researches such as Parsa et al (2016), Ladyshevsky and Taplin (2018), Song et al (2018) and Kools et al (2019). The findings of this research indicated that learning organisational culture prevails among the employees in multinationals promotes self-efficacy (Parsa et al, 2016). Learning organisation activities such as empowerment, strategic leadership and teamwork enables to enhance self-efficacy towards employee behaviour and workload (Ladyshevsky & Taplin, 2018). Learning organisation instill self-efficacy as a result employees work behaviour is more positive towards high job performance by going beyond the job description (Song et al, 2018). Also learning organisation both job satisfaction and responsiveness among the employees to meet and attain employee career advancement through self-efficacy (Kools et al, 2019).

The third hypothesis was that self-efficacy has a positive and significant impact on innovation. The SEM 1 and 2 was carried out to establish the direct effect of self-efficacy on innovation. However, in both SEM also shows that self-efficacy do not has any significant effect on innovation. Therefore the hypothesis (H3) was rejected. Since there is no similar studies done in examining the impact of self-efficacy on innovation among the multinationals in Malaysia, it is extremely challenging to make a fruitful comparison to justify the reason why the result of the study is different from past research. However, Widyani et al (2017) found that the relationship between self-efficacy and innovative behaviour were not significant, which is very similar to the result of this study. Alternatively, the result of the study contradicts the majority of the similar studies done elsewhere and even in Malaysian context. Earlier studies such as Tierney et al (2002) found that employee self-efficacy promotes innovation and high performance, but the study was carried out among the employees in SMEs. Also a study conducted in Malaysian educations sector showed that employee self-efficacy enhances innovative work behaviour through factors that affect employee innovative behaviour (Hsiao et al, 2011; Hsiao et al, 2011). The self-efficacy was linked with innovative behaviour in the workplace separately rather than testing the concept along with learning organisation (Ibus & Ismail, 2018). The finding of the recent study in Malaysia showed that self-efficacy for innovation was one of the key determinants of innovative culture and innovative culture positively and significantly effects innovative behaviour in educational setting (Roffeei et al, 2017). The self-efficacy enables to improve innovation among the employees, particularly in multinationals when they work under a strong leaders or entrepreneurial leaders (Newman et al, 2018). Alternatively, employees becomes more innovative when they work under pressure or challenging work-environment (Riaz et al, 2018).

The last hypothesis was the mediating effect of self-efficacy has a mediating effect on the causal effect of learning organisation on innovation. Throughout the SEM 1 it was confirmed that there was no mediating effect of self-efficacy on the causal impact of learning organisation on innovation. Also analysis using SEM 2 and 3 further confirmed that there was no mediating effect of self-efficacy on the causal relationship between learning organisation and innovation. Therefore the hypothesis (H4) was rejected. As mentioned earlier, this could be the first study in its nature that have tested the mediating effect of self-efficacy on the relationship between learning organisation and innovations, especially among the employees of multinationals in Malaysia. However, previous studies have demonstrated self-efficacy as a mediator and tested its effect on innovation and other variables such as career advancement (Parsa et al, 2014), personality and

innovation (Parsa et al, 2016) and work behaviour and innovation (Li et al, 2017). The job task and innovative self-efficacy could be more important to mediate the relationship between learning organisation and innovation rather than just self-efficacy (Ma et al, 2016 June). In future research, it is important to use innovative self-efficacy and examine how it mediates the knowledge sharing behaviour and learning organisation to instill innovation among the employees of multinationals (Hu & Zhao, 2016).

## **Conclusion and Recommendation**

This research examined the effect of the learning organisation on innovation and the self-efficacy mediating effect among employees of multinationals in Malaysia. Empirical research has identified three key components: learning organisation, innovation, and self-efficacy. The individual factors and the interaction between them are the focus of this study.

Findings concluded that enhancing learning organisation would improve innovation and self-efficacy among the employees in multinationals. Self-efficacy, however, shows negligible positive impact as the mediator between the organization of learning and innovation relationship. To sum up, any multinational organisation that wants to competitively sustain its business performance and improve organizational excellence will capitalise on the conceptualized learning organizational to improve skills and experience, innovative knowledge, competition know-how and self-efficacy of employees. With the introduction of an innovative culture employees become engaged with the innovation seeking behaviour; creating and working on new products or method of services and business model rejuvenation.

While innovation becomes a building block for a learning organisation, senior managers should look at building an ongoing process to ensure that the learning of innovative practices; successful or otherwise is captured and disseminated organisation wide. This practice of ongoing information dissemination will cultivate a supportive culture where management will honour and support experimentation. “Innovation lab” are a way that large corporations establish the innovative culture within the environment. Another well documented approach could be setting up a daily tier review at all levels and sharing one-point learning via email. In daily operations, Kaizen will be beneficial in dealing with urgent and critical situations. In addition, it is most welcome to build a structured learning organization with a long-term educational incentive

Leaders and managers shall use the findings by implementing the associated company policies to foster the concept of learning organization. Whilst policies become an important development in the creation of an innovative culture leaders must be aware of the capability of the staff and thus capability building becomes a priority in the human capital development. Thus by developing staff, leaders are motivating them at the same time to lead on innovative initiatives which in turn creates a learning life cycle.

## ***Implication of Research***

The present study suggests some practical implications to top management, human resource development managers, and operation managers of the multinationals operating

in Malaysia on the importance to inculcate the learning organisation culture in promoting innovative work behaviour among the employees and self-efficacy of the employees to engage in positive work behaviour for the best interest of the organisation.

The findings of the study suggests that there is a crucial need to instill the learning organisation culture among employees including operational, managerial and senior level employees for the significant contribution to organizational performance and innovativeness.

As the innovativeness of multinationals are highly dependent on its employees and the current learning organisational culture, where it encourages employees to engage with continuous learning and capture the information from external environment, true empowerment given to the employees and should allocated and made efforts to instill learning in the organization. Therefore human resource managers are advised that continuous learning opportunities through scholarships, training programmes, and industrial research grants should be made available to promote collaborative learning among the employees to enhance competence and knowledge to improve innovation. Blame free culture.

Through collaborative and team learning culture would be enhanced and strengthen to offer better innovation in the multinational organisations in Malaysia. In addition, platform should be provided for the employees from all the levels in the multinational organisation to express and exchange their ideas and views to foster innovation.

This study contributes to the Human Resource Development body of knowledge by emphasising that multinational organisations should realise the significance of learning organization in cultivating innovation and enhancing self-efficacy of employees. By applying the proposed model of this study, HRD practitioners might design a better coaching and mentoring programs to implement, particularly within a diversified workforce often found in multinational organisations.

Also, HRD managers or practitioners can improve employees' self –efficacy causing to enhance job performance and organizations' effectiveness and efficiency within a learning organization. The result of this study may be useful in helping firms to understand the crucial link between innovation and learning organisation, may help firms develop better competitive strategies. This findings may also be of interest to consultants and support agencies that provide assistance to multinational organisations in Malaysia. The results of this study confirm that the importance of innovation is not limited to well established and large organisations such as multinational organisation which enjoy substantial economies of scale. The contributions of this study are of significance, firstly due to the fact that it is an empirical work.

Since this area of research is new in the context of multinationals, particularly in Malaysia, hence it is vital to lessen the gap of limited empirical work on the topic especially in Malaysia. From a theoretical perspective, this study provides new insights on learning organization culture as a predictor for organizational excellence in terms of self-efficacy and innovativeness. This study confirmed that learning organisation activities are key determinants of innovation and self-efficacy. This means this study

contributes to add value to the existing innovation and self-efficacy theories and literature along with social network theories by establishing that learning organisation is a key determinants of innovation and self-efficacy.

### *Limitation of Research*

Sample size which includes a small size of respondents and the fact that the study's being restricted to one particular multinational organisation only. Ideally, a larger sample size would provide better perspective of the link between the leaning organisation and other two variables such as innovation and self-efficacy using other statistical tests such as regression analysis. Nevertheless, as a preliminary study, the findings provided major contribution on the importance of learning organization culture in promoting innovation and self-efficacy of employees. Some other limitations to this study include lack of generalizability of the findings of the study. The sample, which seemed appropriate for this particular study, was employees from 3M Company based in Malaysia. It would be more meaningful if the same findings hold consistent in different types of employees from other multinationals across Malaysia would enhance generalisability of the findings. Also, it was tested in Malaysia, the result could vary from country to country compared to Malaysia due to the differences in culture, norms and political belief systems existed in Malaysia, researchers should use some caution when citing the results.

### *Future Research Direction*

Future research should utilize larger sample size and should involve various multinational organisations in Malaysia. Besides that, this study specifically concentrates on the direct link of learning organization culture and innovativeness mediated by self-efficacy. Future study should include moderating variables such as employee demographics such as gender, age and education level to give better understanding on the relationships between learning organisation, self-efficacy and innovation. Perhaps, dimensions for learning organisation should be tested separately rather than as a whole and then assess each of these dimensions establish the link with self-efficacy and innovativeness should be detailed out to further understand the relationships.

Finally, this study employed a cross-sectional study design by selecting employees from one multinational over a longitudinal design. Since learning organization culture and activities may takes time to be embedded in the organization, longitudinal design should be considered to capture the link between learning organisation and innovation along with self-efficacy.

### **Author Contributions**

**Dr. Sharmila** is the key person of this research project. She have come-out with the whole research plan and outline of the topic and areas to be covered. The main author in discussion with the two other authors have contributed the writing of the article researched and contributed to the draft of the research and the discussion and analysis. All discussion and analysis derived from the research and methodology were discussed and agreed upon by the other two co-authors. She also have constantly engage with the proof reading and finalising every paragraph once we complete each section. The proof



reading and updating the citation can be considered as her significant contribution as well. The literature review and implication of the paper were owned by her.

**Zubair Hassan** made a significant contribution in terms of statistical analysis of data, interpretation and discussion of the paper. He have integrated the literature review with the result obtained through data analysis. Also he have contributed in finalising the research rationale and formulating the problem statement

**Abdul Basit** made a significant contribution in terms of finding the relevant research papers and collection of data. Also he have contributed immensely in accessing the Multinational company (3M) and also ensuring data collection process was complete on time. Also he have contributed in terms of setting the research gap and research objectives. Finalising the variables and conceptual framework also he have assisted the authors. Also he have contributed in finalising the research rationale and formulating the problem statement

## References

- Adam, J. K., Indradewa, R., & Syah, T. Y. R. (2020). The Leadership Styles Impact, In Learning Organizations, And Organizational Innovation Towards Organizational Performance Over Manufacturing Companies, Indonesia. *Journal of Multidisciplinary Academic*, 4(2), 63-69. <http://www.kemalapublisher.com/index.php/JoMA/article/download/423/433>
- Amarakoon, U., Weerawardena, J., & Verreynne, M. L. (2018). Learning capabilities, human resource management innovation and competitive advantage. *The International Journal of Human Resource Management*, 29(10), 1736-1766. <https://doi.org/10.1080/09585192.2016.1209228>
- Anstiss, P. A., Meijen, C., & Marcora, S. M. (2020). The sources of self-efficacy in experienced and competitive endurance athletes. *International Journal of Sport and Exercise Psychology*, 18(5), 622-638. <https://doi.org/10.1080/1612197X.2018.1549584>
- Armstrong, M. (2019). *A handbook of human resource management practice*, 10th edition, Cambridge University Press, Great Britain
- Argyris, C. (1973). Single loop and double loop models in. *Political Science Review*, 65, 1248-1266
- Bal, H. Ç., & Erkan, Ç. (2019). Industry 4.0 and competitiveness. *Procedia Computer Science*, 158, 625-631. <https://doi.org/10.1016/j.procs.2019.09.096>
- Bandura, A. (2006). Guide for constructing self-efficacy scales. *Self-efficacy beliefs of adolescents*, 5(1), 307-337.
- Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of social and clinical psychology*, 4(3), 359-373. <https://doi.org/10.1521/jscp.1986.4.3.359>

- Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review*, 84(2), 191-215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Bierema, L. L. (1999). The process of the learning organization: Making sense of change. *NASSP Bulletin*, 83(604), 46-56. <https://doi.org/10.1177/019263659908360407>
- Caputo, F., Garcia-Perez, A., Cillo, V., & Giacosa, E. (2019). A knowledge-based view of people and technology: directions for a value co-creation-based learning organisation. *Journal of Knowledge Management*, 23(7), 1314-1334. <https://doi.org/10.1108/JKM-10-2018-0645>
- De Geus, A. P. (1988). Planning as learning. *Harvard Business Review*, (March/April), 70-74
- Delić, M., Slåtten, T., Milić, B., Marjanović, U., & Vulcanović, S. (2017). Fostering learning organisation in transitional economy—the role of authentic leadership and employee affective commitment. *International Journal of Quality and Service Sciences*, 9(3/4), 441-455. <https://doi.org/10.1108/IJQSS-02-2017-0012>
- Doyle, A. M., & Johnson, K. R. (2019). A Revisit of the Learning Organisation: Is It Time?. *Journal of Information & Knowledge Management*, 18(03), 1950030. <https://doi.org/10.1142/S0219649219500308>
- Edwards-Schachter, M. (2018). The nature and variety of innovation. *International Journal of Innovation Studies*, 2(2), 65-79. <https://doi.org/10.1016/j.ijis.2018.08.004>
- Ellinger, A. D., & Ellinger, A. E. (2020). Providing strategic leadership for learning: optimizing managerial coaching to build learning organizations. *The Learning Organization*, (ahead-of-print). <https://doi.org/10.1108/TLO-05-2020-0070>
- Eisenberger, R., Hutchison, S., Sowa, D., and Huntington, R. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71(3), 500-507.
- Fagerberg, J. (2018). Mobilizing innovation for sustainability transitions: A comment on transformative innovation policy. *Research Policy*, 47(9), 1568-1576. <https://doi.org/10.1016/j.respol.2018.08.012>
- Figueiredo, P. N., Larsen, H., & Hansen, U. E. (2020). The role of interactive learning in innovation capability building in multinational subsidiaries: A micro-level study of biotechnology in Brazil. *Research Policy*, 49(6), 1-16. <https://doi.org/10.1016/j.respol.2020.103995>
- Gomes, G., & Wojahn, R. M. (2017). Organizational learning capability, innovation and performance: study in small and medium-sized enterprises (SMES). *Revista de Administração (São Paulo)*, 52(2), 163-175. <http://dx.doi.org/10.1016/j.rausp.2016.12.003>

- Halim, H. A., Ahmad, N. H., & Ramayah, T. (2019). Sustaining the Innovation Culture in SMEs: The Importance of Organisational Culture, Organisational Learning and Market Orientation. *Asian Journal of Business Research*, 9(2), 14-33. <https://doi.org/10.14707/ajbr.190059>
- Hanifah, H., Halim, H. A., Ahmad, N. H., & Vafaei-Zadeh, A. (2019). Emanating the key factors of innovation performance: leveraging on the innovation culture among SMEs in Malaysia. *Journal of Asia Business Studies*, 13(4), 559-587. <https://doi.org/10.1108/JABS-04-2018-0130>
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis*, 5 (3), 207-219. Upper Saddle River, NJ: Prentice hall.
- Hassan, Z., & Basit, A.(2018). Impact of Individual Learning on Team Learning and Innovation in the Petroleum Industry of Malaysia. *International Journal of Management, Accounting and Economics*, 5(6), 417-447. <http://www.ijmae.com/article1147902298adbc0df5b3036186f410a695f2ea.pdf>
- Hoang, G., Wilson-Evered, E., & Lockstone-Binney, L. (2019). Leading innovation among tourism small and medium enterprises. *Leadership & Organization Development Journal*, 40(5), 647-666. <https://doi.org/10.1108/LODJ-08-2018-0287>
- Hsiao, H. C., Chang, J. C., Tu, Y. L., & Chen, S. C. (2011). The impact of self-efficacy on innovative work behavior for teachers. *International Journal of Social Science and Humanity*, 1(1), 31-36. <http://ijssh.org/papers/6-H00112.pdf>
- Hu, B., & Zhao, Y. (2016). Creative self-efficacy mediates the relationship between knowledge sharing and employee innovation. *Social Behavior and Personality: an international journal*, 44(5), 815-826. <https://doi.org/10.2224/sbp.2016.44.5.815>
- Hussein, N., Omar, S., Noordin, F., & Ishak, N. A. (2016). Learning organization culture, organizational performance and organizational innovativeness in a public institution of higher education in Malaysia: A preliminary study. *Procedia Economics and Finance*, 37, 512-519. [https://doi.org/10.1016/S2212-5671\(16\)30159-9](https://doi.org/10.1016/S2212-5671(16)30159-9)
- Ibus, S. binti, & Ismail, F. binti. (2018). Conceptual Framework: The Mediating Effect of SelfEfficacy in the Relationships of Self-Leadership, Knowledge Sharing, and Innovative Work Behaviour. *International Journal of Academic Research in Business and Social Sciences*, 8(11), 1859–1876. <http://dx.doi.org/10.6007/IJARBSS/v8-i11/5378>
- Jaaron, A. A., & Backhouse, C. J. (2017). Operationalising “double-loop” learning in service organisations: a systems approach for creating knowledge. *Systemic Practice and Action Research*, 30(4), 317-337. <https://doi.org/10.1007/s11213-016-9397-0>

- Jain, A. K., & Moreno, A. (2015). Organizational learning, knowledge management practices and firm's performance. *The Learning Organization*, 22(1), 14-39. <https://doi.org/10.1108/TLO-05-2013-0024>
- 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. <https://doi.org/10.1016/j.ijhm.2015.07.002>
- Kanter, R. M. (1988). Three tiers for innovation research. *Communication Research*, 15(5), 509-523. <https://doi.org/10.1177/009365088015005001>
- Kim, K., Watkins, K. E., & Lu, Z. L. (2017). The impact of a learning organization on performance. *European Journal of Training and Development*, 41(2), 177-193. <https://doi.org/10.1108/EJTD-01-2016-0003>
- King N. & N. Anderson (2002). *Managing and change: a critical guide for organizations*. London: Thomson
- Kools, M., Gouëdard, P., George, B., Steijn, B., Bekkers, V., & Stoll, L. (2019). The relationship between the school as a learning organisation and staff outcomes: A case study of Wales. *European Journal of Education*, 54(3), 426-442. <https://doi.org/10.1111/ejed.12355>
- Ladyshevsky, R., & Taplin, R. (2018). The interplay between organisational learning culture, the manager as coach, self-efficacy and workload on employee work engagement. *International Journal of Evidence Based Coaching and Mentoring*, 16(2), 3-19. <https://doi.org/10.24384/000483>
- Leonardi, P., & Contractor, N. (2018). Better people analytics. *Harvard Business Review*, 96(6), 70-81.
- Lenihan, H., McGuirk, H., & Murphy, K. R. (2019). Driving innovation: Public policy and human capital. *Research Policy*, 48(9), 1-19. <https://doi.org/10.1016/j.respol.2019.04.015>
- Li, M., Liu, Y., Liu, L., & Wang, Z. (2017). Proactive personality and innovative work behavior: The mediating effects of affective states and creative self-efficacy in teachers. *Current Psychology*, 36(4), 697-706. <https://doi.org/10.1007/s12144-016-9457-8>
- Liao, S. H., Chen, C. C., Hu, D. C., Chung, Y. C., & Yang, M. J. (2017). Developing a sustainable competitive advantage: absorptive capacity, knowledge transfer and organizational learning. *The Journal of Technology Transfer*, 42(6), 1431-1450. <https://doi.org/10.1007/s10961-016-9532-1>
- Ma, S., Wang, Y., & Liu, F. (2016, June). The mediator role of innovative self-efficacy between person-organization fit and innovative behavior. *In 2016 13th*

*International Conference on Service Systems and Service Management (ICSSSM)*  
(pp. 1-6). IEEE. <https://doi.org/10.1109/ICSSSM.2016.7538515>

- Martocchio, J. J., & Judge, T. A. (1997). Relationship between conscientiousness and learning in employee training: Mediating influences of self-deception and self-efficacy. *Journal of Applied Psychology*, 82(5), 764.
- Martínez-Costa, M., Jiménez-Jiménez, D., & Dine Rabeh, H. A. (2019). The effect of organisational learning on interorganisational collaborations in innovation: an empirical study in SMEs. *Knowledge Management Research & Practice*, 17(2), 137-150. <https://doi.org/10.1080/14778238.2018.1538601>
- Marsick, V. J., & Watkins, K. E. (2003). Demonstrating the value of an organization's learning culture: the dimensions of the learning organization questionnaire. *Advances in developing human resources*, 5(2), 132-151. <https://doi.org/10.1177/1523422303005002002>
- Maurer, T. J., Mitchell, D. R., & Barbeite, F. G. (2002). Predictors of attitudes toward a 360-degree feedback system and involvement in post-feedback management development activity. *Journal of Occupational and Organizational Psychology*, 75(1), 87-107. <https://doi.org/10.1348/096317902167667>
- Maurer, T. J. (2001). Career-relevant learning and development, worker age, and beliefs about self-efficacy for development. *Journal of management*, 27(2), 123-140. <https://doi.org/10.1177/014920630102700201>
- Mavondo, F. T., Chimhanzi, J., & Stewart, J. (2005). Learning orientation and market orientation. *European journal of marketing*, 39(11/12), 1235-1263. <https://doi.org/10.1108/03090560510623244>
- Mazzucato, M. (2017). Mission-oriented innovation policy. UCL Institute for Innovation and Public Purpose *Working Paper*. <https://www.thersa.org/globalassets/pdfs/reports/mission-oriented-policy-innovation-report.pdf>
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological methods*, 1(2), 130-149.
- Montes, F. J. L., Moreno, A. R., & Morales, V. G. (2005). Influence of support leadership and teamwork cohesion on organizational learning, innovation and performance: an empirical examination. *Technovation*, 25(10), 1159-1172. <https://doi.org/10.1016/j.technovation.2004.05.002>
- Newman, A., Herman, H. M., Schwarz, G., & Nielsen, I. (2018). The effects of employees' creative self-efficacy on innovative behavior: The role of entrepreneurial leadership. *Journal of Business Research*, 89, 1-9. <https://doi.org/10.1016/j.jbusres.2018.04.001>



- Odor, H. O. (2018). A literature review on organizational learning and learning organizations. *International Journal of Economics & Management Sciences*, 7(1), 1-6. <https://doi.org/10.4172/2162-6359.1000494>
- Parsa, B., Parsa, P., & Parsa, N. (2016). Mediation effect of self-efficacy on the relationship between mentoring function and career advancement among academics in Iran. *Global journal of health science*, 8(10), 295-306. <https://doi.org/10.5539/gjhs.v8n10p295>
- Parsa, B., Idris, K. B., Samah, B. B. A., Wahat, N. W. B. A., Parsa, P., & Parsa, N. (2014). The mediating effect of self-efficacy on the relationships between learning organization and career advancement among academic employees in Hamadan, Iran. *Life Science Journal*, 11(11), 218-222. [http://www.lifesciencesite.com/ljsj/life1111/030\\_24665life111114\\_218\\_222](http://www.lifesciencesite.com/ljsj/life1111/030_24665life111114_218_222).
- Pati, S. P., & Kumar, P. (2010). Employee engagement: Role of self-efficacy, organizational support & supervisor support. *Indian Journal of Industrial Relations*, 126-137. <https://www.jstor.org/stable/25741102>
- Pedler, M. (1998). Action learning in practice. *The Learning Organization*, 5(4), pp. 202-203. <https://doi.org/10.1108/tlo.1998.5.4.202.1>
- Pedler, M., & Burgoyne, J. G. (2017). Is the learning organisation still alive?. *The Learning Organization*, 24(2), 119-126. <https://doi.org/10.1108/TLO-12-2016-0087>
- Porter, M. E. (1990). The competitive advantage of nations. *Harvard business review*, 68(2), 73-93.
- Raj, R., & Srivastava, K. B. (2016). Mediating role of organizational learning on the relationship between market orientation and innovativeness. *The Learning Organization*, 23 (5), 370-384. <https://doi.org/10.1108/TLO-09-2013-0051>
- Rezaei, A., Allameh, S. M., & Ansari, R. (2018). Effect of organisational culture and organisational learning on organisational innovation: an empirical investigation. *International Journal of Productivity and Quality Management*, 23(3), 307-327. <https://doi.org/10.1504/IJPQM.2018.089803>
- Roffeei, S. H. M., Kamarulzaman, Y., & Yusop, F. D. (2017). Inculcating innovative behaviour among students: Determinants of innovation culture in Malaysian higher education. *MOJEM: Malaysian Online Journal of Educational Management*, 5(4), 1-17. <https://doi.org/10.22452/mojem.vol5no4.1>.
- Rupčić, N. (2020). Learning organisation as technology for the socio-economic paradigm implementation. *International Journal of Agile Systems and Management*, 13(2), 182-212. <https://doi.org/10.1504/IJASM.2020.107899>
- Salthouse, T. (2012). Consequences of age-related cognitive declines. *Annual review of psychology*, 63, 201-226. <https://doi.org/10.1146/annurev-psych-120710-100328>

- Schmidt, F. L., Hunter, J. E., & Outerbridge, A. N. (1986). Impact of job experience and ability on job knowledge, work sample performance, and supervisory ratings of job performance. *Journal of applied psychology*, 71(3), 432. <https://doi.org/10.1037/0021-9010.71.3.432>
- Schneider, N. (2019). Decentralization: an incomplete ambition. *Journal of Cultural Economy*, 12(4), 265-285. <https://doi.org/10.1080/17530350.2019.1589553>
- Schumpeter, J.A. (1934). *Theory of economic development*, Cambridge: Harvard University Press
- Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. Measures in health psychology: A user's portfolio. *Causal and control beliefs*, 1(1), 35-37.
- Senge, P (1990). *The fifth discipline. The Art & Practice of Learning Organization*. Doubleday Currence, New York.
- Shih, T. Y. (2018). Determinants of enterprises radical innovation and performance: Insights into strategic orientation of cultural and creative enterprises. *Sustainability*, 10(6), 1871. <https://doi.org/10.3390/su10061871>
- Song, J. H., Chai, D. S., Kim, J., & Bae, S. H. (2018). Job performance in the learning organization: The mediating impacts of self-efficacy and work engagement. *Performance Improvement Quarterly*, 30(4), 249-271. <https://doi.org/10.1002/piq.21251>
- Sung, S., Rhee, J., & Yoon, J. (2016). Learning organisation activities and innovativeness of tech-based SMEs within Korean technoparks: The mediating role of learning transfer. *Science, Technology and Society*, 21(3), 410-434. <https://doi.org/10.1177/0971721816666120>
- Sutapa, S., Mulyana, M., & Wasitowati, W. (2017). The role of market orientation, creativity and innovation in creating competitive advantages and creative industry performance. *JDM (Jurnal Dinamika Manajemen)*, 8(2), 152-166. <https://doi.org/10.15294/jdm.v8i2.12756>
- Tanwar, R. (2013). Porter's generic competitive strategies. *Journal of business and management*, 15(1), 11-17. <https://sswm.info/sites/default/files/referenceattachments/TANWAR%202013%20Porter%E2%80%99s%20Generic%20Competitive%20Strategies.pdf>
- Teng, W & Hassan, Z (2015). The Influence of Transformational Leadership in Creating a Learning Organisation. *International Journal of Accounting and Business Management*, 3(1), 162-186. <https://doi.org/10.24924/ijabm/2015.04/v3.iss1/162.186>
- Thompson, V. A. (1965). Bureaucracy and innovation. *Administrative science quarterly*, 10(1), 1-20. <https://doi.org/10.2307/2391646>

- Tortorella, G. L., Fettermann, D., Cauchick Miguel, P. A., & Sawhney, R. (2020). Learning organisation and lean production: an empirical research on their relationship. *International Journal of Production Research*, 58(12), 3650-3666. <https://doi.org/10.1080/00207543.2019.1633028>
- Watkins, K. E., Marsick, V. J., Wofford, M. G., & Ellinger, A. D. (2018). The evolving Marsick and Watkins (1990) theory of informal and incidental learning. *New Directions for Adult and Continuing Education*, 2018(159), 21-36. <https://doi.org/10.1002/ace.20285>
- Widayani, A. A. D., Sarmawa, I. W. G., & Dewi, I. G. A. M. (2017). The roles of knowledge sharing in mediating the effect of self-efficacy and self-leadership toward innovative behavior. *Jurnal Manajemen dan Kewirausahaan*, 19(2), 112-117. <https://doi.org/10.9744/jmk.19.2.112-117>
- Ziemiańczyk, U., & Krakowiak-Bal, A. (2017). Learning organisations as a part of the process of building the competitiveness and innovativeness in rural areas. *International Journal of Business and Emerging Markets*, 9(1), 19-32. <https://doi.org/10.1504/IJBEM.2017.080791>
- Zhu, X., Law, K. S., Sun, C., & Yang, D. (2019). Thriving of employees with disabilities: The roles of job self-efficacy, inclusion, and team-learning climate. *Human Resource Management*, 58(1), 21-34. <https://doi.org/10.1002/hrm.21920>

#### COPYRIGHTS

©2020 The author(s). This is an open access article distributed under the terms of the Creative Commons Attribution (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, as long as the original authors and source are cited. No permission is required from the authors or the publishers.



#### HOW TO CITE THIS ARTICLE

Sethumadevan, S., Hassan, Z., Basit, A. (2020). Enhancing Innovation through Learning Organisation among the Multinationals in Malaysia: Mediating Role of Self Efficacy. *International Journal of Management, Accounting and Economics*, 7(11), 622-647.

DOI: 10.5281/zenodo.4335770

URL: [http://www.ijmae.com/article\\_120554.html](http://www.ijmae.com/article_120554.html)

