

Learning Organizations and Innovative Work Behaviors: A Moderated Mediation Model of Creative Self-Efficacy and Self-Leadership from the Perspective of Social Cognitive Theory and Social Schema Theory

Muhammad Salman Chughtai¹ | Yasra Khalid²

¹Ph.D. Scholar, Faculty of Management Sciences, International Islamic University, Islamabad

²Department of Business Administration, University of Sahiwal, Sahiwal

Correspondence

Muhammad Salman Chughtai
(salman.phdmgt80@iiu.edu.pk)

Submitted: January 07, 2022

Revised: April 12, 2022

Accepted: June 19, 2022

Published online: June 30, 2022

ABSTRACT

Purpose: The purpose of this study is to investigate the direct effect of learning organizations on innovative work behaviors. This study also examines the mediating effect of creative self-efficacy between learning organizations and innovative work behaviors. Additionally, this study investigates the moderating role of self-leadership between creative self-efficacy and innovative work behaviors.

Study design/methodology/approach: A total of 487 permanent employees (361 subordinates and 126 immediate officers/supervisors) from the manufacturing sector voluntarily in a non-contrived setting participates in the data collection survey. Statistical analysis of this study is conducted using different statistical software (SPSS v.25, AMOS v.22, and Smart-PLS v.3) to test the direct, mediation, moderation, and moderated mediation hypothesized relationships.

Findings: Results of this study reveal that learning organizations predict innovative work behaviors of employees. This study's findings also reveal that creative self-efficacy partially mediates the relationship between learning organizations and innovative work behaviors. Furthermore, results indicate that a higher level of self-leadership moderates the positive relationship between creative self-efficacy and innovative work behaviors. Finally, this study's results confirm that a higher level of self-leadership indirectly influences the positive relationship between learning organizations and innovative work behaviors via creative self-efficacy.

Research limitations/implications for Practice: The present study highlights the importance of learning organizations for the enhancement of innovative work behaviors of employees. The employees' creative self-efficacy helps the management to overcome the uncertain situations of rapid globalized change through innovative behaviors. Additionally, self-leadership is vital for individuals and organizations to support the learning organization's culture and creative self-efficacy for enhancing innovative work behaviors.

Originality/value of the Results: The present study will be helpful for the management how to overcome the circumstances of unprecedented changes which occur rapidly around the world; also, the findings of this study be beneficial for the management that how to increase the innovative behaviors of their workforce, which are now mandatory for survival and competitive advantage. Moreover, this study adds knowledge to positive psychology and organizational behavior by explaining the mediating role of creative self-efficacy and moderating role of self-leadership.

Keywords: Learning Organizations (LOs), Creative Self-Efficacy (CSE), Self-Leadership (SL), Innovative Work Behaviors (IWBs), Social Schema Theory (SST), Social Cognitive Theory (SCT)

1 | INTRODUCTION

Start of this century and especially in the last decade, technological advancement and globalization not only restructure the organizational environment ([Chughtai, Syed, & Naseer, 2022](#); [Fazekas, 2021](#)). but also promote competition, which forces organizations to transform their working according to the requirements of the era of change ([Iqbal, Latif, & Ahmad, 2020](#)). These changed circumstances create ambiguity, vagueness, and higher

risk, making it challenging for the management of the organizations and workforce to take initiatives for a successful change implementation with clear directions ([Rupčić, 2022](#)). In contrast, innovations become obligatory for the sustainability of the organizations in the highly competitive market; also to handle the situations which occur due to swift globalized change ([Lee, Choi, & Kang, 2021](#)). Now, it has become mandatory for organizations to concentrate on their human capital by using the learning means to modernize their systems for sustainable transformation in the rapidly changing world. In the modern era, response to rapid change is possible with innovations that can be attained through learning; for that purpose, there is a need for awareness among the employees about learning, which alternatively boosts creative pressure for a meaningful change ([Rupčić, 2022](#)) that produces positive outcomes, i.e., IWBs.

The learning organizations (LOs) platform allows organizations to create an environment of innovation and positively respond to the new environment by implementing the change ([Ramírez, 2021](#)). By employing the LOs phenomenon, individuals and organizations expand their expertise and capacity through learning, allowing them to produce high performance ([Goh & Ryan, 2002](#); [Senge, 1990](#)). By utilizing the concept of LOs (i.e., feedback, sharing of knowledge, learning, and self-improving thinking), organizations can promote innovation to attain competitive advantage and survival ([Holba, Bahr, Birx, & Fischler, 2019](#)). In contrast, the approaches of LOs not only occupy the organization's workforce in the expressive and respected work but also enable them to be a good social person ([Pedler & Hsu, 2019](#)). Additionally, organizations can positively respond to rapid change by utilizing LOs approaches, i.e., structure and learning environment ([Pourkiani & Tanabandeh, 2016](#)).

Innovation is indispensable for organizations' higher efficiency and economic growth ([McCann & Sparks, 2019](#)). Moreover, to develop innovative work behaviors (IWBs), individuals become imperative for effective working, survival, and competitive advantage ([Rhee, Seog, Bozorov, & Dedahanov, 2017](#)). IWBs reflect the novelty during the operational process and procedures of the products/services. In other words, IWBs are considered the method of adopting new, creative, and novel ideas in the workplace that can be used or developed into valuable resources/outcomes ([Sung & Kim, 2021](#)). Moreover, McCann and Sparks ([2019](#)) explain that the actual behaviors of employees intricate the generation, advancement, and application of novel ideas at the workplace. Nemours scholars concluded, especially from the last decade's research, that individuals can generate novel ideas through inventiveness ([Madrid, Patterson, Birdi, Leiva, & Kausel, 2014](#); [Yidong & Xinxin, 2013](#)).

Employees' self-confidence has been observed to boost their motivation for accepting challenges and generating novel ideas ([Farmer & Tierney, 2017](#)). Moreover, creative self-efficacy (CSE) concerns employees' confidence level in their innovative and creative abilities, which enables them to accept challenges in adverse situations and produce positive outcomes ([Brockhus, Van der Kolk, Koeman, & Badke-Schaub, 2014](#)). CSE gives positive feelings to the individuals for the achievement of the targets and strengthens their beliefs of innovativeness and creativity ([Brockhus et al., 2014](#)). It has also been observed that employees with a higher level of self-confidence about creative ideas generation produce innovative behaviors at the individual ([Teng, Hu, & Chang, 2020](#)) and team levels ([Park, Jang, Thomas, & Smith, 2021](#)).

In today's working circumstances, organizations require continuous and constant change ([Maykrantz & Houghton, 2020](#); [Seubert, Hornung, & Glaser, 2017](#)); for that purpose, humans are needed with the characteristics of self-motivation and self-direction. The phenomenon of self-leadership (SL) offers "behavior-focused," "natural reward-based," and "constructive thought pattern" strategies that enable individuals to achieve their personal

goals through intrinsic motivation by managing unpleasant professional responsibilities ([Deci & Ryan, 1987](#); [Neck & Houghton, 2006](#); [Stewart, Courtright, & Manz, 2011](#)). Moreover, Neck and Houghton ([2006, p. 270](#)) defined the concept of SL as “a process through which individuals control their behavior, influencing and leading themselves through the use of specific sets of behavioral and cognitive strategies.” With the qualities of SL, individuals make different strategies to control their behavior in uncertain circumstances and mold them into opportunities for the attainment of their desired outcomes and behaviors ([Carmeli, Meitar, & Weisberg, 2006](#); [Prussia, Anderson, & Manz, 1998](#)). Moreover, these strategies allow individuals to control themselves and enhance their responsibilities and capabilities, which alternatively influence their performance, efficiency, and positive behaviors ([Prussia et al., 1998](#)).

1.1 | Research Objectives

- i. Examines the relationship between learning organizations and innovative work behaviors.
- ii. Examines creative self-efficacy's mediating role between the relationship of learning organizations and innovative work behaviors.
- iii. Examines the moderating role of self-leadership between the relationship of creative self-efficacy and innovative work behaviors.
- iv. Examines the indirect effect (moderated mediation) of self-leadership between the relationship of learning organizations and innovative work behaviors through creative self-efficacy.

1.2 | Research Questions

- i. Does a higher level of learning organization regulate the employees' innovative work behaviors, especially in the manufacturing sector?
- ii. Does creative self-efficacy mediate the relationship between learning organizations and employees' innovative work behaviors, especially in the manufacturing sector?
- iii. Does self-leadership moderate the relationship between creative self-efficacy and employees' innovative work behaviors, especially in the manufacturing sector?
- iv. Does self-leadership moderate the mediation of creative self-efficacy between the relationship of learning organizations and employees' innovative work behaviors, especially in the manufacturing sector?

1.3 | Need for this Study

In developing countries, especially in Pakistan, there is a lack of innovations, particularly in the manufacturing sector, due to the less devotion by the management and working situations ([Saleem, Tufail, Atta, & Asghar, 2015](#)). In contrast, the current situation of post-pandemic forces organizations to promote IWBs for survival in the highly competitive globalized market, where customers demand high-quality products from the organizations. Organizations are under pressure to overcome the globalized high competition and uncertainty for their survival and competitive advantage. It is alarming for researchers, practitioners, and policymakers to find solutions for these unprecedented circumstances. Therefore, the present study answers the call of Zhao et al. ([2022](#)) by explaining the factors (LOs and CSE) influencing the IWBs of the manufacturing sector employees by collecting data from multi-level. Moreover, this study overcomes the suggested gap by Hassani et al. ([2022](#)), where they suggested that there is a need for research to examine the impact of LOs on another outcome with different intervening constructs; for that purpose, the researchers of this study use IWBs as criterion variable and CSE as an intervening variable. By following the suggestion of Rupčić ([2022](#)), the researchers of the present study use SL as a moderator between CSE–IWBs relationship. Moreover, Harari et al. ([2021](#)) suggested in their

meta-analytic study that SL behaviors may be helpful with self-efficacy for positive outcomes; therefore, the researchers of this study propose CSE as a mediator and SL as a moderator for higher IWBs.

2 | LITERATURE REVIEW

Social schema theory (SST) ([DiMaggio, 1997](#); [Moscovici, 1982](#)) and Social cognitive theory (SCT) ([Bandura, 1986](#)) offer the theoretical underpinning and clarification of the proposed relationships of this study. SST ([DiMaggio, 1997](#); [Moscovici, 1982](#)) derives from the word 'schemata,' a storage piece in human brains, where humans save the information from their social experiences (positive/negative). In other words, 'social schemata' means a structure of memory of humans from their social experiences, which they recall to respond to present and future behaviors ([Paulik, 2012](#); [Strauss & Quinn, 1997](#)). Additionally, Augoustinos and Innes ([1990](#)) explain that humans hold four types of schemata in their brains, 'person, self, role and event' schemata, and these schemata help the individuals to interpret the information from their brains and accordingly at the workplace after quick processing of information in their minds. Furthermore, these schemata also enable individuals to make strategies for accomplishing their personal and professional goals and fulfilling professional responsibilities. Moreover, DiMaggio ([1997](#)) suggested that humans' 'social schemata' can be replaced with 'attention', 'culture', and 'motivation'. So, the researchers of this study proposed that by using the concept of LOs, management can modify their workforce's negative 'social schemata', which results in positive outcomes, i.e., CSE and IWBs. It is further proposed that the organization's environment in the form of learning enhances the level of confidence (CSE) and ability to accept the challenges of change and alter them into opportunities. In contrast, SCT ([Bandura, 1986](#)) explains that the organizational environment influences the learning process of individuals at the workplace, which helps them with energetic decision-making and creative activities. SCT ([Bandura, 1986](#)) clarifies that human cognitive abilities motivate them to accomplish challenging and uncertain tasks according to their expectations. SCT ([Bandura, 1986](#)) further explains that individuals' past experiences allow them to generate behavioral actions in the workplace. Self-efficacy of the individuals is extraordinary in SCT, and it talks about their specific abilities and self-confidence, which occur due to different environments and individual factors ([Niu, Willoughby, & Zhou, 2021](#); [Pan, 2020](#)). Based on this notion, it is proposed that SL as an individual factor moderates the relationship between CSE and IWBs.

2.1 | Learning Organizations and Innovative Work Behaviors

Organizational change is a learning tool for individuals through which they can get career opportunities, and organizations benefit from innovation ([Hatane, 2015](#)). LOs contribute to the development of individuals and organizations; through the system's transformation, organizations can innovate and reshape their products/services ([Chughtai et al., 2022](#); [Szabla, Pasmore, Barnes, & Gipson, 2017](#)). Proper learning planning for the individuals and implementation of new practices enable smooth functioning and thinking about novel ideas ([Khunsoonthornkit & Panjakajornsak, 2018](#)). LOs enhance the workforce's IWBs and thoughts by increasing job satisfaction, adaptability, expertise, and skills ([Soh & Ali, 2021](#)) to become more competitive and respond to market requirements by renovating products/services. It has also been observed that LOs foster the culture of innovations in organizations through continuous learning and change adaptability to achieve competitive advantage ([Acevedo & Diaz-Molina, 2022](#)). It becomes necessary for higher organizational productivity and

economic growth to encourage the IWBs of the workforce, which further results in competitive advantage ([McCann & Sparks, 2019](#)). Innovation comes into existence with the help of creative brains and technological features. Moreover, individuals' desire to learn about the latest technologies encourages them to generate, execute, and implement novel ideas ([Li, ud din Khan, Chughtai, & Le, 2022](#); [Mustika, Eliyana, Agustina, & Ratnasari, 2020](#)). In line with the above discussion, the researchers of this study proposed that:

Hypothesis 1: *Learning Organizations positively influence the Innovative Work Behaviors*

2.2 | Creative Self-Efficacy as Mediator

Creativity is concerned with the effective and unique generation of new ideas for the successful attainment of organizational goals; and for the benefits and development of individuals ([Du et al., 2020](#); [Runco & Jaeger, 2012](#)). In contrast, self-efficacy is related to individuals' capacity and self-confidence to accept challenges ([Zhang, Wang, Chu, & Xu, 2011](#); [Zhou & Long, 2011](#)). CSE is an imperative antecedent for generating creative and innovative ideas ([Farmer & Tierney, 2017](#); [Tierney & Farmer, 2002](#)). It has been appealed in previous studies that a progressive level of CSE enables individuals to improve their work-related tasks through creative and innovative ideas ([Du et al., 2020](#); [Newman, Herman, Schwarz, & Nielsen, 2018](#); [Zhou & Long, 2011](#)), and a poorer level of CSE results in substandard creative and innovative performance ([Hahn & Lee, 2017](#)). Creative and innovative minds at the workplace reshape products/services using novel ideas and enable organizations to respond to the requirements of consumers/customers ([Alikaj, Ning, & Wu, 2020](#)). In contrast, it has also been observed that innovation cannot become possible without the initiative of employees, and that initiative may start, when organizations can engage their workforce the generation and exploration of new and novel ideas ([B. Javed, Fatima, Khan, & Bashir, 2021](#); [Madrid et al., 2014](#)). The concept of LOs through empowerment, knowledge sharing, and cooperation enhances the level of confidence of individuals so that they can accept challenges and convert them into opportunities. The learning interest of employees, with the support of a learning culture, enables them to generate novel and valuable ideas for modifying procedures and processes of the products/services ([Karimi, Ahmadi Malek, & Yaghoubi Farani, 2021](#)). During the change process, LOs, through the culture of learning, increase their level of confidence in the form of CSE, reducing the threat ([Farmer & Tierney, 2017](#); [Tierney & Farmer, 2002](#)) that individuals feel from the change in policies and procedures, which become the cause of increase to the failure of the change implementation process ([Hansen, Jensen, & Nguyen, 2020](#)). Numerous studies show a positive link of CSE with IWBs ([Jan, Zainal, & Lata, 2021](#); [A. Javed, Iqbal, Iqbal, & Imran, 2021](#); [B. Javed et al., 2021](#); [Kumar, Upadhyay, Yadav, & Goyal, 2022](#); [Park et al., 2021](#)). In line with the above discussion of literature, the following hypothesis is proposed:

Hypothesis 2: *Creative Self-Efficacy mediates the positive relationship between Learning Organizations and Innovative Work Behaviors.*

2.3 | Moderating Role of Self-Leadership

Through SL, employees feel motivated to achieve higher individual and organizational performance ([Neck, Manz, & Houghton, 2019](#); [Stewart et al., 2011](#); [Stewart, Courtright, & Manz, 2019](#)). It becomes necessary, especially for organizations where a learning culture promotes SL strategies must be encouraged for ongoing innovation ([Manz, Pearce, Mott, Henson, & Sims Jr, 2013](#)). The concept of SL through cognitive and behavioral strategies encourages individuals to learn ([Neck et al., 2019](#)), resulting in several positive outcomes, i.e., IWBs.

Individuals with a higher level of SL set their goals through their self-management, self-control, self-reward, self-analysis, and self-punishment strategies and shape their behaviors for the achievement of performance goals (Gomes, Curral, & Caetano, 2015; Manz, 2012; Neck et al., 2019; Stewart et al., 2019). In contrast, Martinsen (2009) stated that SL is beyond the self-strategies; he asserted that “coordination of efforts, cooperation with others, novelty-seeking thought, and a willingness to acquire the necessary knowledge to master task requirements” are the new facets of SL (Amundsen & Martinsen, 2015). Moreover, it has also been observed that SL enhances the employees' knowledge sharing and innovation activities (Asbari, Novitasari, Purwanto, Fahmi, & Setiawan, 2021). Earlier studies show that there is a positive link between SL and IWBs, and it is proposed that when employees are more self-motivated and self-directed by using these skills, they will be able to produce more IWBs (Asurakody & Kim, 2020; Gomes et al., 2015; Widayani, Sarmawa, & Dewi, 2017). Additionally, numerous studies emphasized that a higher level of SL produces various positive outcomes, i.e., higher job performance, innovation, job satisfaction, work effort, and creativity (Amundsen & Martinsen, 2015; Asbari et al., 2021; Gomes et al., 2015; Marques-Quinteiro, Vargas, Eifler, & Curral, 2019). Furthermore, Goldsby et al. (2021) stated in their study that the SL concept in the future becomes advantageous for the training of innovators and creative professionals. Based on this notion, the researchers of this study proposed that CSE, with the support of SL in the form of coordination, novel thinking, and acquisition of knowledge, enhances the employees' IWBs. In line with the above discussion of literature, the researchers of this study advance the following hypothesis:

Hypothesis 3: *Self-Leadership moderates the relationship between Creative Self-Efficacy and Innovative Work Behaviors; in such a sense that a higher level of Self-Leadership strengthens the positive relationship.*

2.4 | Moderated Mediation Model

The conceptual model of this study hypothesized that SL enables the employees to produce higher IWBs through self-direction, self-management, and self-control; the characteristics of SL with CSE with the culture of LOs. To obtain this study objective, the researchers employed the moderated mediation methods suggested by Hayes (2018), through which the researchers investigated the indirect effect of SL on the relationship between LOs and IWBs via CSE.

Hypothesis 4: *Self-Leadership indirectly influences the relationship between Learning Organizations and Innovative Work Behaviors via Creative Self-Efficacy, such that a higher level of Self-Leadership will strengthen this relationship.*

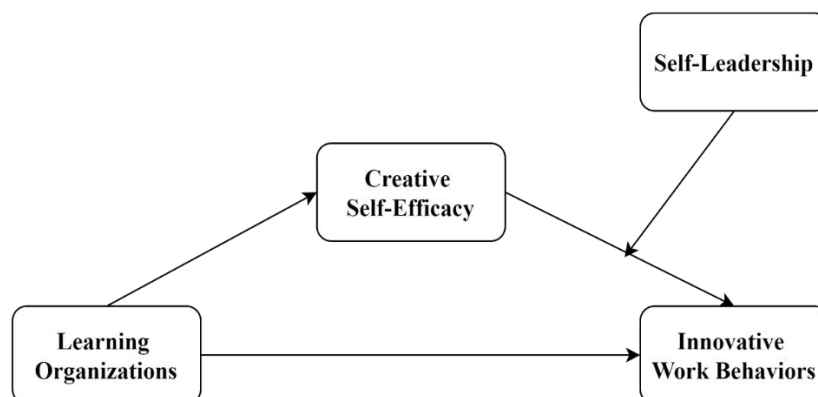


Figure 1: Conceptual Model

3 | METHODOLOGY & DESIGN

The sample of this study was permanent employees (subordinates and their immediate officers/supervisors) working in manufacturing sector organizations in major cities of Pakistan. Data for this study was collected from the manufacturing sector's operational departments (production, sales, marketing, research and development, and quality control). Data for this study was collected using a simple random sampling technique; further opinions of the subordinates were collected through a self-administered method. To overcome the biasness of self-administered opinions of the participants, the data was collected using the temporal separation technique as suggested by Podsakoff et al. (2003). Data for this study was collected in two phases, and there was a one-month temporal separation between the first and second phases of data collection. For predictor (LOs), mediating (CSE), and moderating (SL) variables, data was collected from the subordinates, and for criterion (IWBs) variables, data was collected from the immediate officers/supervisors of those subordinates who took part in both phases of data collection. In the first phase, 700 survey forms were distributed to subordinates for the collection of their opinions about LOs and SL, and 550 survey forms were received at the end of the first phase; in the second phase, 550 survey forms were distributed to those subordinates who participated in the first phase for the collection of their opinions about CSE; and 361 survey forms were considered correct for the further statistical analysis. In contrast, 200 survey forms were distributed to immediate officers/supervisors to collect their opinions about the IWBs of their subordinates; and 126 survey forms were considered correct for further statistical analysis. The aggregate response rate was 57.29%, the response rate for the survey forms distributed to subordinates was 51.57%, and the response rate for the survey forms distributed to immediate officers/supervisors was 63%.

3.1 | Measurement Scale

Measurement scales used in the present study were adopted from the previously published studies, and all scales were assessed on a 5-point Likert scale from 'strongly disagree' to 'strongly agree.'

3.2 | Learning Organizations

Opinions of subordinates about learning organizations were collected using a 13-items scale by Marsick & Watkins (2003). Sample items of the scale are "In my organization, people help each other learn" and "In my organization, people identify the skills they need for future work tasks". The Cronbach alpha value of this scale is .91.

3.3 | Creative Self-Efficacy

Opinions of subordinates about their creative self-efficacy level were collected by adopting the 3-items scale of Tierney and Farmer (2002). Sample items of the scale are "I have confidence in my ability to solve a problem creatively" and "I feel that I am good at generating novel ideas". The Cronbach alpha value of this scale is .74.

3.4 | Self-Leadership

Perceptions of subordinates about self-leadership were measured using a 9-item scale by Houghton et al. (2012). The sample items of the scale are "I establish specific goals for my own performance" and "I try to mentally evaluate the accuracy of my own beliefs about situations I am having problems with". The Cronbach alpha value of this scale is .88.

3.5 | Innovative Work Behaviors

Opinions of immediate officers/supervisors about their subordinates' innovative work behaviors were measured using the 6-items scale adopted from Scott and Bruce (1994). Sample items of the scale are “He/She promotes and champions ideas to others” and “He/she searches out new technologies, processes, techniques, and/or product ideas”. One item was removed during the statistical analysis of confirmatory factor analysis. The Cronbach alpha value of this scale is .86.

4 | RESULTS AND DISCUSSION

To test this study's hypothesized model, different statistical analyses were conducted using statistical software SPSS, AMOS, and Smart-PLS. Statistical software SPSS (Statistical Package for Social Sciences) is beneficial, especially for social and management sciences (Zheng, Wu, & Xie, 2017). Statistical software AMOS (Analysis of Moment Structures) is a powerful statistical tool that enables the researchers to analyze the data in a very easy way using covariance constructed structural equation modeling of complex models (Afthanorhan, 2013; Kim, 2004); also, AMOS simplifies the specification procedure by automatically including the estimation of variances by default for entire independent aspects (Byrne, 2013). In contrast, Smart-PLS statistical software runs the analysis with small sample size, non-normal data, and with constructs having a small number of items (even with a single item), also Smart-PLS test the complex models with full insights by creating data in multi-groups as compared to other software (J. F. Hair, Hult, Ringle, & Sarstedt, 2017; Ringle, Sarstedt, & Straub, 2012).

4.1 | Exploratory Factor Analysis

KMO and Bartlett's Test of Sphericity was conducted; Table 1 shows the values of the KMO test, which are above .90, which is 'marvelous' as recommended by Kaiser (1974), and the value of Bartlett's Test of Sphericity is found significant as $p < .001$ which also meets the threshold as recommended by Hair et al. (2010a) which shows the authenticity of the model factors which is also shown by drawing the scree plot in Figure 2.

Table 1. KMO and Bartlett Tests		
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.912
Bartlett's Test of Sphericity	Approx. Chi-Square	5161.097
	df	435
	Sig.	.000

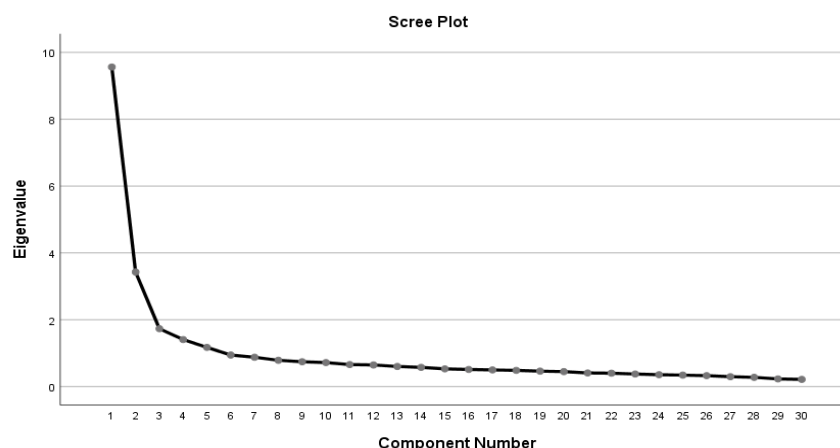


Figure 2: Scree Plot

4.2 | Confirmatory Factor Analysis

Before the start of further analysis, confirmatory factor analysis (CFA) was run to check the fit goodness of the proposed model of this study. Table 2 shows the goodness of fit model indicators obtained using AMOS v.22. Researchers analyzed the data through the two-factor models and full model, and the values of the full model found the best fit of the model than the two-factor models, measurement indicators of full model meets thresholds limits as recommended by ([Hair, Black, Babin, & Anderson, 2010b](#); [Hu & Bentler, 1999](#)).

Table 2. Model Measurement								
Acceptable Range	1-3	>.90	>.80	>.90	>.90	>.90	<.09	<.08
Measurement Indicators	CMIN/DF	GFI	AGFI	CFI	TLI	NFI	RMR	RMSEA
LO-IWBs	2.48	.89	.79	.90	.91	.86	.08	.07
LO-CSE	2.71	.90	.78	.87	.89	.87	.06	.08
LO-SL	2.11	.88	.79	.89	.88	.86	.07	.07
Full Model	1.88	.94	.91	.95	.94	.92	.05	.05

4.3 | Reliability and Discriminant Validity of the Constructs

In the next phase, the reliability and validity of the data were analyzed through SPSS and Smart-PLS. The first portion of Table 3 shows the values of the Fornell and Larker criterion, where diagonal values are greater than values shown in columns and rows, which shows that there is no discriminant validity issue, according to the recommendation of Fornell-Larker ([1981](#)). In the second portion of Table 3, the values of HTMT (Heterotrait-Monotrait Ratio) are less than .90, which shows the presence of discriminant validity, as suggested by Henseler, Ringle, and Sarstedt ([2015](#)).

Table 3. Discriminant Validity				
Variables	Fornell-Larker Criterion			
	LOs	CSE	SL	IWBs
LOs	.71			
CSE	.57	.75		
SL	.31	.35	.77	
IWBs	.24	.22	.64	.66
Variables	HTMT (Heterotrait-Monotrait Ratio)			
	LOs	CSE	SL	IWBs
LOs	-			
CSE	.57	-		
SL	.32	.34	-	
IWBs	.24	.21	.57	-
Note: LOs; learning organizations, CSE; creative self-efficacy, SL; self-leadership, IWBs; innovative work behaviors				

4.4 | Descriptive Statistics and Correlations

Table 4 shows the descriptive statistics and correlations of the all-study variables, where all study variables positively and significantly correlated with each other at the significance level of .01. LOs positively and significantly correlated with CSE ($r=.25^{**}$, $p<.01$), with SL ($r=.59^{**}$, $p<.01$) and with IWBs ($r=.30^{**}$, $p<.01$); CSE significantly and positively correlated with SL ($r=.21^{**}$, $p<.01$) and with IWBs ($r=.46^{**}$, $p<.01$) and SL positively and significantly correlated with IWBs ($r=.17^{**}$, $p<.01$). Moreover, CR (composite reliability)

value for all study variables is above than .700 and AVE (average variance extracted) value of all study variables is also above than the .500 the threshold limit as suggested by Hair et al. (2010a).

Table 4. Descriptive Statistics and Correlations

Variables		Mean	SD	CR	AVE	1	2	3	4
1	LOs	3.66	.7531	.95	.57	(.91)	.25**	.59**	.30**
2	CSE	3.75	.7236	.78	.54		(.74)	.21**	.46**
3	SL	3.79	.7222	.93	.59			(.88)	.18**
4	IWBs	3.68	.8499	.88	.59				(.86)

Note: LOs; learning organizations, CSE; creative self-efficacy, SL; self-leadership, IWBs; innovative work behaviors, ** $p < .01$, reliabilities statistics are in parenthesis, SD; standard deviation, CR; composite reliability, AVE; average variance extracted

4.5 | Direct Effects

Table 5 shows the values of direct effects, which researchers calculated using PROCESS-macro with a bootstrapping sample of 5000, as Hayes (2018) recommended. Values of direct effect reveals that LOs significantly and positively influences the IWBs ($\beta = .22$, $SE = .07$, $t = 3.26$, $p < .001$, LL/UL-CIs = .09/.36), and CSE ($\beta = .24$, $SE = .05$, $t = 4.71$, $p < .001$, LL/UL-CIs = .14/.34); in contrast, CSE significantly and positively influences the IWBs ($\beta = .48$, $SE = .08$, $t = 5.98$, $p < .001$, LL/UL-CIs = .32/.64). Therefore, these results prove H1 of this study.

4.6 | Mediation Effects

Table 5 also shows the values of indirect effects, which were calculated through PROCESS-macro using a bootstrapping sample of 5000, as Hayes (2018) recommended. Indirect effect analysis results reveal that CSE positively and significantly but partially mediates the LOs – IWBs relationships ($\beta = .12$, $SE = .03$, LL/UL-CIs = .07/.18) as now zero found between the values of upper- and lower-class intervals. Moreover, the researchers also employ the Smart-PLS algorithm technique for the confirmation of direct and indirect effects, which, shown in Figure 3, also authenticates the previous results where (LOs→IWBs = .19, $p < .01$; LOs→CSE = .31, $p < .001$; CSE→IWBs = .51, $p < .001$). Thus, these findings prove H₂ of the present study.

Table 5. Direct and Indirect Effects

Relationships	Coeff	SE	t-value	p-value	LL/UL-CIs
Direct Effects					
LOs → IWBs	.22	.07	3.26	.001	.09/.36
LO → CSE	.24	.05	4.71	.000	.14/.34
CSE → IWBs	.48	.08	5.98	.000	.32/.64
Mediation Effects					
Indirect Effects (LOs → CSE → OIs)	.12	.03			.07/.18

Note: LOs; learning organizations, CSE; creative self-efficacy, SL; self-leadership, IWBs; innovative work behaviors, UL/LL-CI; upper and lower-level class intervals

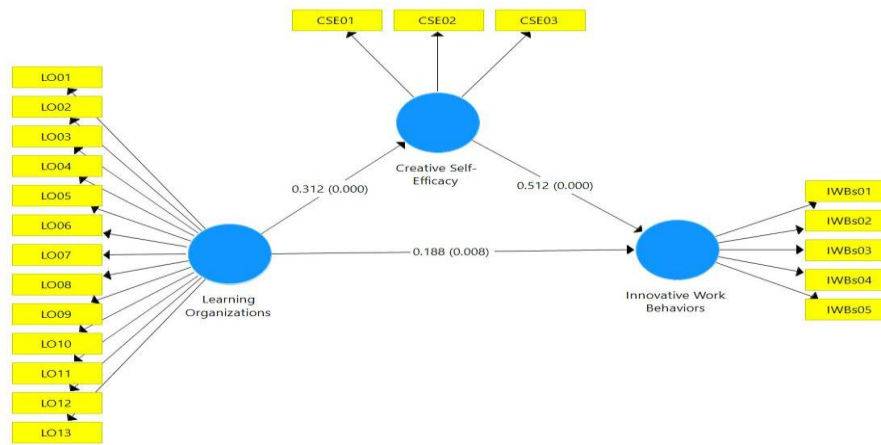


Figure 3: Mediation Analysis through Smart-PLS

4.7 | Moderation Effects

Table 6 reveals the values of moderation analysis which were calculated through PROCESS-macro using a bootstrapping sample of 5000, as Hayes (2018) suggested. Researchers found a positive link found between CSE and IWBs ($\beta = .49$, $SE = .07$, $t = 7.37$, $p < .001$, $LL/UL-CIs = .37/.63$), between SL and IWBs ($\beta = .17$, $SE = .06$, $t = 2.66$, $p < .01$, $LL/UL-CIs = .04/.29$). Further, the interaction (CSE x SL) also positively and significantly affects the IWBs ($\beta = .30$, $SE = .09$, $t = 3.27$, $p < .001$, $LL/UL-CIs = .12/.48$). Moderation results which were calculated using the algorithm technique of Smart-PLS shown in Figure 4, authenticate the previous results where (CSE→IWBs = .52, $p < .001$; SL→IWBs = .18, $p < .001$; CSE x SL→IWBs = .24, $p < .001$). Thus, these findings prove H₃ of this study.

Table 6. Moderation Analysis					
Moderation Effects					
Relationships	Coeff	SE	t-value	p-value	LL/UL-CIs
Constant	3.65	.04	87.92	.000	3.56/3.73
CSE	.49	.07	7.37	.000	.37/.63
SL	.17	.06	2.66	.008	.04/.29
Interaction (CSE x SL) → IWBs	.30	.09	3.27	.001	.12/.48
Note: LOs; learning organizations, CSE; creative self-efficacy, SL; self-leadership, IWBs; innovative work behaviors, UL/LL-CI; upper and lower-level class intervals					

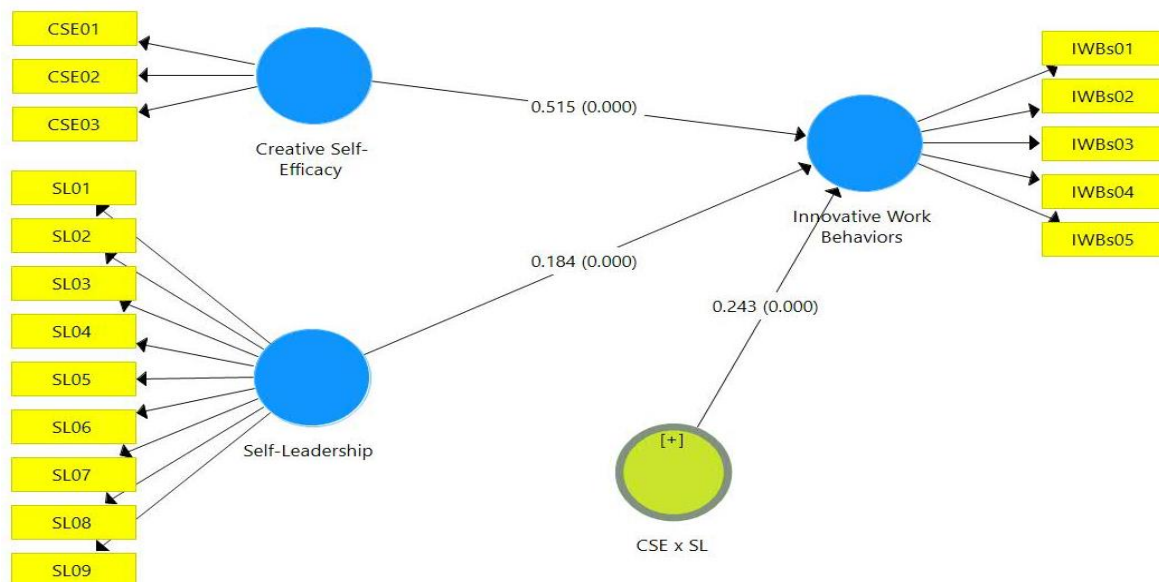


Figure 4: Moderation (CSE x SL) Analysis through Smart-PLS

The moderation slope shown in Figure 5 explains that when the level of CSE of the individuals was higher, with higher SL perceptions, they demonstrated higher IWBs. Furthermore, the researchers also generated an interaction slope through the algorithm technique of Smart-PLS, as shown in Figure 6, which explains that the IWBs of the employees were higher when the interaction (CSE x SL) term was above the mean and IWBs were lower when the interaction (CSE x SL) term was lower than the mean values; it shows that a higher level of SL with higher CSE increases the IWBs.

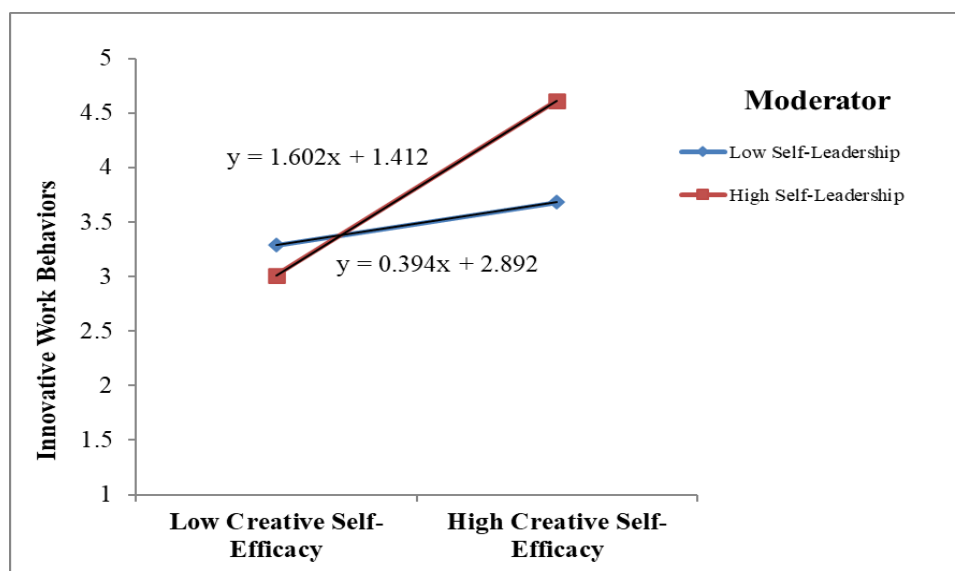


Figure 5: Moderation Slope (CSE x SL)

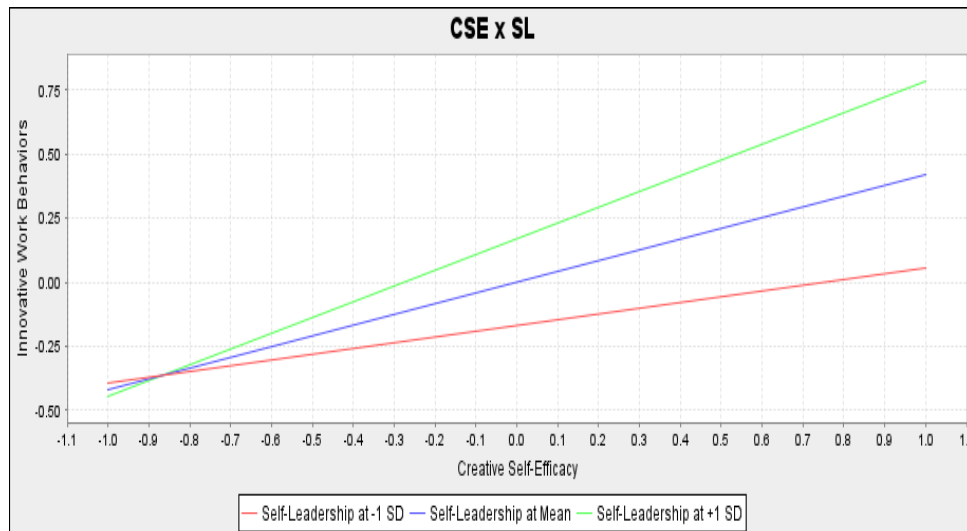


Figure 6: Interaction Slope (CSE x SL) through Smart-PLS

4.8 | Moderated Mediation Effects

Moreover, Table 7 reveals the values of moderated mediation which researchers of this study calculated using the bootstrapping technique with a 5000 sample size, as Hayes (2018) suggested. Results indicates that SL indirectly influence the relationship of LOs and IWBs via CSE, at below than mean ($\beta = .05$, $SE = .03$, $LL/UL-CIs = .03/.12$), at mean ($\beta = .07$, $SE = .03$, $LL/UL-CIs = .03/.15$) and above than mean ($\beta = .10$, $SE = .04$, $LL/UL-CIs = .04/.19$). Moreover, the moderated mediation index values also prove indirect effect of SL between LOs – IWBs relationships via CSE ($\beta = .04$, $SE = .02$, $LL/UL-CIs = .01/.08$). Moderated mediation results were also calculated using the algorithm technique of Smart-PLS as shown in Figure 7 to authenticate the previous results where (LOs→CSE = .31, $p < .001$; LOs→IWBs = .22, $p < .001$; CSE→IWBs = .49, $p < .001$; SL→IWBs = .06, $p < .001$; CSE x SL→IWBs = .22, $p < .001$). Thus, these findings confirm the H_4 of this study.

Table 7. Moderated Mediation				
Moderation Mediation – Hayes Model-14				
Relationships	Effect	SE	LL-CI	UL-CI
Below than Mean (-.72)	.05	.03	.03	.12
At Mean (.00)	.07	.03	.03	.15
Above Than Mean (.72)	.10	.04	.04	.19
Moderation Mediation Index	.04	.02	.01	.08
Note: LOs; learning organizations, CSE; creative self-efficacy, SL; self-leadership, IWBs; innovative work behaviors, UL/LL-CI; upper and lower-level class intervals				

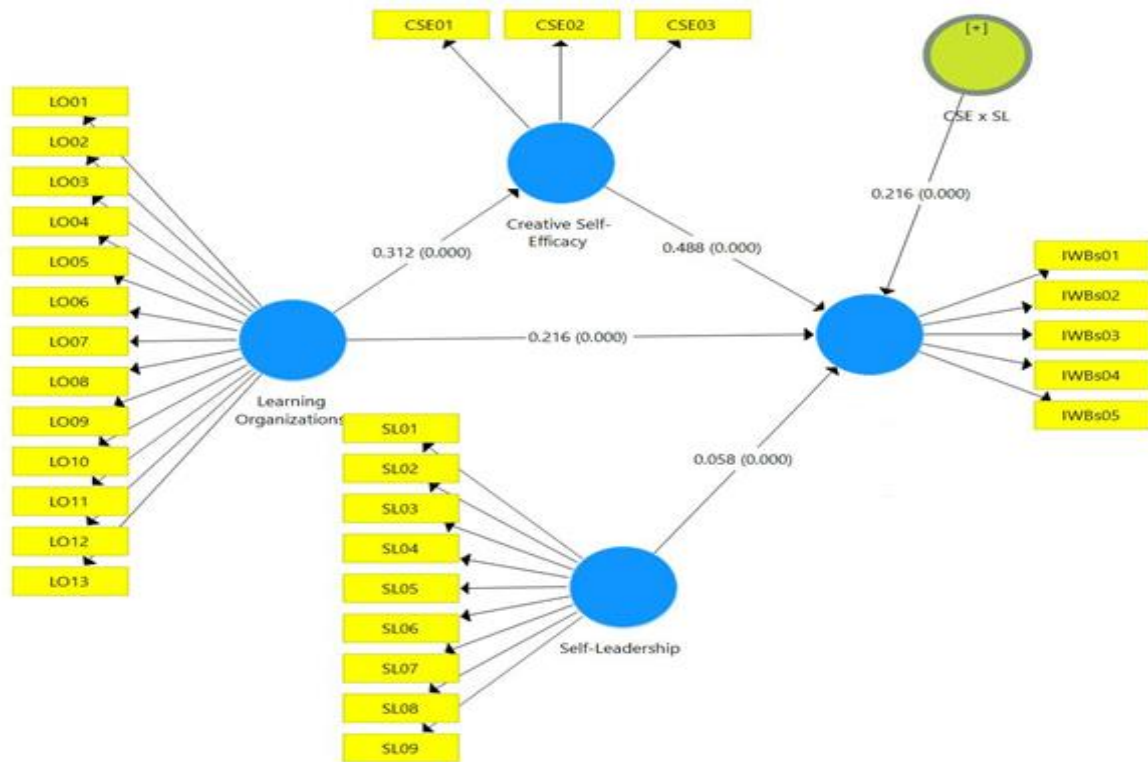


Figure 7: Moderated Mediation through Smart-PLS

5 | DISCUSSION

By utilizing the theoretical lens of SST ([DiMaggio, 1997](#); [Moscovici, 1982](#)), and SCT ([Bandura, 1986](#)), this study aims to examine the direct influence of LOs on IWBs; further, the researchers examine the intervening role of CSE between the relationship of LOs and IWBs; additionally, the researchers also investigate the moderating role of SL between the association of CSE and IWBs. The current study's first hypothesis (H1) predicted that LOs are positively linked with IWBs; the findings of this study proved this hypothesis; further earlier studies also support the acceptance of this hypothesis ([Allouzi, Suifan, & Alnuaimi, 2018](#); [Cangialosi, Odoardi, & Battistelli, 2020](#); [Chughtai et al., 2022](#); [Eskiler, Ekici, Soyer, & Sari, 2016](#); [Lubis, Dalimunthe, & Siahaan, 2019](#)). The findings of this study explain that in the current era of rapid change when innovative behaviors of the workforce become the mandatory tool for the survival of organizations ([Li et al., 2022](#)), the platform of LOs plays a vital role in attaining competitive advantage and learning of employees and organization as well. The study's second hypothesis (H2) predicted that CSE mediates the relationship between LOs and IWBs; and the results of the current study support this hypothesis; additionally, the earlier studies also evidenced for the acceptance of this hypothesis ([Alameri, Ameen, Khalifa, Alrajawy, & Bhaumik, 2019](#); [Du et al., 2020](#); [Karimi et al., 2021](#); [Kumar et al., 2022](#); [Royston & Reiter-Palmon, 2019](#); [Wang, Liu, & Shalley, 2018](#)). These findings further elucidate that LOs develop individuals' level of confidence in the form of CSE, which further produces IWBs ([Kumar et al., 2022](#)). In other words, the IWBs of the individuals can be improved with the enhancement of CSE, especially in learning organizations. This study's third hypothesis (H3) predicted that SL moderates the relationship between CSE and IWBs; and the findings of this study verified this hypothesis; also, the earlier studies provide support

for the acceptance of this hypothesis ([Amundsen & Martinsen, 2015](#); [Asbari et al., 2021](#); [Goldsby et al., 2021](#); [Mustika et al., 2020](#); [Stewart et al., 2019](#)). These findings further describe that the self-motivation, self-control, and self-management strategies of individuals with higher CSE allow them to produce IWBs ([Mustika et al., 2020](#)). In other words, if the individuals are strong to accept challenging tasks and can convert them into opportunities, they regulate a higher level of IWBs at the workplace, especially during the change process. This study's fourth hypothesis (H4) predicted that SL indirectly affects the relationship between LOs and IWBs via CSE. The study's findings prove this hypothesis and enlighten that strategies of self-management, self-control, and self-motivation with higher self-confidence of creativity with the support of LOs allow employees to accept challenges and modify them into opportunities. These findings further describe that SL enables employees to make decisions about complex tasks in the workplace ([Khan, Zhiqiang, Chughtai, & Mingxing, 2022](#)).

5.1 | Theoretical Implications

Theoretically, this research reviews the literature on different phenomena, i.e., LOs, CSE, SL, and IWBs, and provides a theoretical extension of knowledge into social schema theory and social cognitive theory within the context of organizational behavior and positive psychology literature. From the perspective of Senge's ([1990](#)) concept of LOs, the researchers of this study elucidate LOs as a system that benefits individuals and organizations equally. In contrast, the system of LOs through learning, empowerment, and sharing of knowledge boosts the level of self-confidence of employees in the form of higher CSE for creative decision-making at the workplace. Moreover, this study enlightens the importance of CSE and SL for IWBs; by explaining the theoretical lens of SCT ([Bandura, 1986](#)) that the culture and situation of the organization play an energetic role in learning, self-confidence, and support for the generation of creative ideas, which resulted into positive outcomes of employees. Additionally, this study also explicates how the organizational environment in the form of learning develop the level of CSE, and individual factors such as self-regulation, self-motivation, and self-direction also benefit the individuals in the generation, execution, and application of innovative ideas.

5.2 | Practical Implications

Empirically the present study suggests that the management of the organizations implements the concept of LOs for higher performance and enhancement of inventive self-confidence of their workforce. Moreover, training by the organizations about the awareness of SL and CSE allows the individuals to accept the challenges during the change process and antagonistic situations in the workplace. Support of management in the form of LOs through sharing of knowledge, feedback, empowerment, and learning provide confidence to accept the challenging responsibilities at the workplace and modify them into opportunities with the support of professional knowledge that they gain through learning. Management of the organizations must observe that the organizational environment is according to the phenomena of LOs for the achievement of higher innovative performance and for the enhancement of morale of their workforce so that they can accept the changes and challenges which are the requirement of a highly globalized competitive market.

5.3 | Limitations and Future Directions

In the present study, the researchers use CSE as a mediator; it is suggested that future researchers use other constructs, such as knowledge management practices and employees' personal initiative, as mediators between the relationship of LOs and other positive outcomes (IWBs). Furthermore, this study used SL as a moderator and suggested that future researchers use other personal and leadership factors as moderators, such as

proactive personality and conscious leadership, for higher positive outcomes with the utilization of the LOs concept. Finally, it is suggested that future researchers use LOs as an antecedent of other outcomes, i.e., career success, resistance to change, and change-related commitment.

6 | CONCLUSION

The findings of this study explained that the culture of LOs is imperative for higher IWBs in the workforce. LOs provide a platform for knowledge sharing, feedback, empowerment, and the generation of new ideas, which boost the level of self-confidence of employees in the form of CSE. Moreover, it has also been observed by the findings of this study that if individuals are self-motivated, self-directed, self-controlled, and have the ability of self-management, they also become important for organizations to solve complex problems during the change process. By applying the phenomenon of LOs, management can retain the intellectual capital of higher CSE and SL to attain a competitive advantage.

REFERENCES

- Acevedo, J., & Diaz-Molina, I. (2022). Learning organizations in emerging economies: the effect of knowledge management on innovative culture in Chilean companies. *The Learning Organization* (ahead-of-print).
- Afthanorhan, W. (2013). A comparison of partial least square structural equation modeling (PLS-SEM) and covariance based structural equation modeling (CB-SEM) for confirmatory factor analysis. *International Journal of Engineering Science and Innovative Technology*, 2(5), 198-205.
- Alameri, M., Ameen, A., Khalifa, G. S., Alrajawy, I., & Bhaumik, A. (2019). The Mediating Effect of Creative Self-Efficacy on the Relation between Empowering Leadership and Organizational Innovation. *TEST Engineering and Management*, 8, 1938-1946.
- Alikaj, A., Ning, W., & Wu, B. (2020). Proactive Personality and Creative Behavior: Examining the Role of Thriving at Work and High-Involvement HR Practices. *Journal of Business and Psychology*, 1-13.
- Allouzi, R. A. R., Suifan, T. S., & Alnuaimi, M. (2018). Learning organizations and innovation mediated by job satisfaction. *International Journal of Business and Economics Research*, 7(1), 7-19.
- Amundsen, S., & Martinsen, Ø. L. (2015). Linking Empowering Leadership to Job Satisfaction, Work Effort, and Creativity: The Role of Self-Leadership and Psychological Empowerment. *Journal of Leadership & Organizational Studies*, 22(3), 304-323. doi:10.1177/1548051814565819
- Asbari, M., Novitasari, D., Purwanto, A., Fahmi, K., & Setiawan, T. (2021). Self-leadership to Innovation: The Role of Knowledge Sharing. *International Journal of Social and Management Studies*, 2(5), 21-36.
- Asurakkody, T. A., & Kim, S. H. (2020). Effects of knowledge sharing behavior on innovative work behavior among nursing Students: Mediating role of Self-leadership. *International Journal of Africa Nursing Sciences*, 12, 100190.
- Augoustinos, M., & Innes, J. M. (1990). Towards an integration of social representations and social schema theory. *British Journal of Social Psychology*, 29(3), 213-231.
- Bandura. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Brockhus, S., Van der Kolk, T., Koeman, B., & Badke-Schaub, P. (2014). *The influence of creative self-efficacy on creative performance*. Paper presented at the DS 77: Proceedings of the DESIGN 2014 13th International Design Conference.
- Byrne, B. M. (2013). *Structural Equation Modeling with AMOS, Basic Concepts, Applications, and Programming* (3rd ed.). New York: Routledge.
- Cangialosi, N., Odoardi, C., & Battistelli, A. (2020). Learning Climate and Innovative Work Behavior, the Mediating Role of the Learning Potential of the Workplace. *Vocations and Learning*, 1-18.
- Carmeli, A., Meitar, R., & Weisberg, J. (2006). Self-leadership skills and innovative behavior at work. *International journal of Manpower*, 27(1), 75-90.
- Chughtai, M. S., Syed, F., & Naseer, S. (2022). Learning Organizations and Employees' Outcomes: A Perspective of Psychosocial Safety Climate. *NICE Research Journal*, 15-46.

- Deci, E. L., & Ryan, R. M. (1987). The Support of Autonomy and the Control of Behavior. *Journal of Personality and Social Psychology*, 53(6), 1024-1037.
- DiMaggio, P. (1997). Culture and cognition. *Annual review of sociology*, 23(1), 263-287.
- Du, K., Wang, Y., Ma, X., Luo, Z., Wang, L., & Shi, B. (2020). Achievement goals and creativity: the mediating role of creative self-efficacy. *Educational Psychology*, 40(10), 1249-1269.
- Eskiler, E., Ekici, S., Soyer, F., & Sari, I. (2016). The relationship between organizational culture and innovative work behavior for sports services in tourism enterprises. *Physical culture and sport. Studies and research*, 69(1), 53-64.
- Farmer, S. M., & Tierney, P. (2017). Considering Creative Self-Efficacy: Its Current State and Ideas for Future Inquiry. In *The Creative Self* (pp. 23-47): Elsevier.
- Fazekas, N. (2021). *Learning Organizations and Organizational Digital Competencies in the Field of Public Education*. Paper presented at the New Horizons in Business and Management Studies, Budapest.
- Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, 18(3), 382-388.
- Goh, S. C., & Ryan, P. J. (2002). *Learning capability, organization factors and firm performance*. Paper presented at the Third European conference on organizational knowledge, learning and capabilities.
- Goldsby, M. G., Goldsby, E. A., Neck, C. B., Neck, C. P., & Mathews, R. (2021). Self-Leadership: A Four Decade Review of the Literature and Trainings. *Administrative Sciences*, 11(1), 25.
- Gomes, C., Curral, L., & Caetano, A. (2015). The mediating effect of work engagement on the relationship between self-leadership and individual innovation. *International Journal of Innovation Management*, 19(01), 1550009.
- Hahn, M. H., & Lee, K. C. (2017). Exploring the role of self-confidence, need-for-cognition, and the degree of IT support on individual creativity: Multilevel analysis approach. *Current Psychology*, 36(3), 565-576.
- Hair, Black, W., Babin, B., & Anderson, R. (2010a). Multivariate data analysis In (7th ed.). Upper Saddle River (NJ): Prentice Hall.
- Hair, Black, W., Babin, B., & Anderson, R. (2010b). Multivariate data analysis 7th edth ed. In. Upper Saddle River (NJ): Prentice Hall.
- Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*: Sage publications.
- Hansen, J. Ø., Jensen, A., & Nguyen, N. (2020). The responsible learning organization: can Senge (1990) teach organizations how to become responsible innovators? *The Learning Organization*, 27(1), 65-74.
- Harari, M. B., Williams, E. A., Castro, S. L., & Brant, K. K. (2021). Self-leadership: A meta-analysis of over two decades of research. *Journal of Occupational and Organizational Psychology*, 1-35.
- Hassani, E., Gelard, P., Sharifzadeh, F., & Azad, N. (2022). The Impact of Learning Organizations on Employee Performance with an Emphasis on Network Communication Approach. *Education in the Knowledge Society (EKS)*, 23, 1-15.
- Hatane, S. E. (2015). Employee satisfaction and performance as intervening variables of learning organization on financial performance. *Procedia-Social and Behavioral Sciences*, 211, 619-628.
- Hayes, A. F. (2018). *Introduction to Mediation, Moderation, and Conditional Process Analysis* (2nd ed.). New York: The Guilford Press.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135.
- Holba, A. M., Bahr, P. T., Birx, D. L., & Fischler, M. J. (2019). Integral Learning and Working: Becoming a Learning Organization. *New Directions for Higher Education*, 2019(185), 85-99.
- Houghton, J. D., Dawley, D., & DiLiello, T. C. (2012). The abbreviated self-leadership questionnaire (ASLQ): A more concise measure of self-leadership. *International Journal of Leadership Studies*, 7(2), 216-232.
- Hu, L. t., & Bentler, P. M. (1999). Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives. *Structural equation modeling: a multidisciplinary journal*, 6(1), 1-55.
- Iqbal, A., Latif, K. F., & Ahmad, M. S. (2020). Servant leadership and employee innovative behaviour: exploring psychological pathways. *Leadership & Organization Development Journal*, 41(6), 813-827.
- Jan, G., Zainal, S. R. M., & Lata, L. (2021). Enhancing innovative work behaviour: the role of servant leadership and creative self-efficacy. *On the Horizon*, 29(2), 33-51.
- Javed, A., Iqbal, J., Iqbal, S. M. J., & Imran, M. (2021). Sustainable leadership and employee innovative behavior: Discussing the mediating role of creative self-efficacy. *Journal of Public Affairs*, 21(3), e2547.

- Javed, B., Fatima, T., Khan, A. K., & Bashir, S. (2021). Impact of inclusive leadership on innovative work behavior: the role of creative self-efficacy. *The Journal of Creative Behavior*, 55(3), 769-782.
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39(1), 31-36.
- Karimi, S., Ahmadi Malek, F., & Yaghoubi Farani, A. (2021). The relationship between proactive personality and employees' creativity: the mediating role of intrinsic motivation and creative self-efficacy. *Economic Research-Ekonomska Istraživanja*, 1-20.
- Khan, H. S. U. D., Zhiqiang, M., Chughtai, M. S., & Mingxing, L. (2022). A Moderated Mediation Model of Self-Leadership and Innovative Work Behaviors. *Academy of Management Proceedings*, 2022(1), 16024. doi:10.5465/AMBPP.2022.16024abstract
- Khunsoonthornkit, A., & Panjakajornsak, V. (2018). Structural equation model to assess the impact of learning organization and commitment on the performance of research organizations. *Kasetsart Journal of Social Sciences*, 39(3), 457-462.
- Kim, K. (2004). *AMOS structure equation model analysis*. Seoul: Hannarae Academy.
- Kumar, D., Upadhyay, Y., Yadav, R., & Goyal, A. K. (2022). Psychological capital and innovative work behaviour: The role of mastery orientation and creative self-efficacy. *International Journal of Hospitality Management*, 102, 103157.
- Lee, W. R., Choi, S. B., & Kang, S.-W. (2021). How leaders' positive feedback influences employees' innovative behavior: The mediating role of voice behavior and job autonomy. *Sustainability*, 13(4), 1901.
- Li, M., ud din Khan, H. S., Chughtai, M. S., & Le, T. T. (2022). Innovation Onset: A Moderated Mediation Model of High-Involvement Work Practices and Employees' Innovative Work Behavior. *Psychology Research and Behavior Management*, 15, 471-490.
- Lubis, S. M., Dalimunthe, R. F., & Siahaan, E. (2019). The effect of learning organizations, achievement motivation through work environment as a moderating variable on the job satisfaction of temporary employees'(non medical) in the administration service of North Sumatra University Hospital Medan, Indonesia. *European Journal of Human Resource Management Studies*, 3(1), 42-58.
- Madrid, H. P., Patterson, M. G., Birdi, K. S., Leiva, P. I., & Kausel, E. E. (2014). The role of weekly high-activated positive mood, context, and personality in innovative work behavior: A multilevel and interactional model. *Journal of Organizational Behavior*, 35(2), 234-256.
- Manz, C. C. (2012). *Mastering Self Leadership: Empowering Yourself for Personal Excellence* (6th Ed.). Englewood Cliffs, N.J: Prentice Hall.
- Manz, C. C., Pearce, C. L., Mott, J. W., Henson, Z., & Sims Jr, H. P. (2013). Don't take the lead... share the lead. *Organizational dynamics*, 42(1), 54-60.
- Marques-Quinteiro, P., Vargas, R., Eifler, N., & Curral, L. (2019). Employee adaptive performance and job satisfaction during organizational crisis: the role of self-leadership. *European Journal of Work and Organizational Psychology*, 28(1), 85-100.
- 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.
- Martinsen, Ø. L. (2009). *Self-leadership: An expanded theory, a new self-leadership inventory, and some research findings*. Paper presented at the XIV European Congress of Work and Organizational Psychology, , Santiago de Compostela, Spain.
- Maykrantz, S. A., & Houghton, J. D. (2020). Self-leadership and stress among college students: Examining the moderating role of coping skills. *Journal of American College Health*, 68(1), 89-96.
- McCann, J., & Sparks, B. (2019). The effects of leadership styles on innovative work behavior and the role of locus of control in the manufacturing environment. *Journal of Organizational Psychology*, 19(1), 79-94.
- Moscovici, S. (1982). The coming era of representations. In *Cognitive analysis of social behavior* (pp. 115-150): Springer.
- Mustika, H., Eliyana, A., Agustina, T. S., & Ratnasari, R. T. (2020). Knowledge Sharing Behavior Between Self-Leadership and Innovative Behavior. *Journal of Security & Sustainability Issues*, 9(5), 148-157.
- Neck, C. P., & Houghton, J. D. (2006). Two decades of self-leadership theory and research Past developments, present trends, and future possibilities. *Journal of Managerial Psychology*, 21, 270-295.
- Neck, C. P., Manz, C. C., & Houghton, J. D. (2019). *Self-leadership: The definitive guide to personal excellence*: Sage Publications.
- Newman, A., Herman, H., 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.
- Niu, Z., Willoughby, J., & Zhou, R. (2021). Associations of health literacy, social media use, and self-efficacy with health information-seeking intentions among social media users in China: cross-sectional survey. *Journal of medical Internet research*, 23(2), e19134.

- Pan, X. (2020). Technology acceptance, technological self-efficacy, and attitude toward technology-based self-directed learning: learning motivation as a mediator. *Frontiers in Psychology*, 11, 564294.
- Park, N. K., Jang, W., Thomas, E. L., & Smith, J. (2021). How to organize creative and innovative teams: creative self-efficacy and innovative team performance. *Creativity Research Journal*, 33(2), 168-179.
- Paulik, G. (2012). The role of social schema in the experience of auditory hallucinations: a systematic review and a proposal for the inclusion of social schema in a cognitive behavioural model of voice hearing. *Clinical Psychology & Psychotherapy*, 19(6), 459-472.
- Pedler, M., & Hsu, S.-w. (2019). Regenerating the learning organisation: towards an alternative paradigm. *The Learning Organization*, 26(1), 97-112.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.
- Pourkiani, M., & Tanabandeh, M. (2016). Expressing the relationship between Organizational Learning and Job Engagement with the mediating role of Employees' Readiness for Change (Case Study: Employees of Tehran Customs). *IIOAB JOURNAL*, 7(Suppl 3), 443-451.
- Prussia, G. E., Anderson, J. S., & Manz, C. C. (1998). Self-leadership and performance outcomes: the mediating influence of self-efficacy. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 19(5), 523-538.
- Ramírez, C. A. P. (2021). Towards developing of Industrial Learning Organizations in the city of Lima-Peru. *South Florida Journal of Development*, 2(1), 23-33.
- Rhee, J., Seog, S. D., Bozorov, F., & Dedahanov, A. T. (2017). Organizational structure and employees' innovative behavior: The mediating role of empowerment. *Social Behavior and Personality: an international journal*, 45(9), 1523-1536.
- Ringle, C. M., Sarstedt, M., & Straub, D. W. (2012). Editor's Comments: A Critical Look at the Use of PLS-SEM in "MIS Quarterly". *MIS quarterly*, 36(1), iii-xiv.
- Royston, R., & Reiter-Palmon, R. (2019). Creative self-efficacy as mediator between creative mindsets and creative problem-solving. *The Journal of Creative Behavior*, 53(4), 472-481.
- Runco, M. A., & Jaeger, G. J. (2012). The standard definition of creativity. *Creativity Research Journal*, 24(1), 92-96.
- Rupčić, N. (2022). Threats and opportunities for learning organizations–Nordic perspective and experience. *The Learning Organization*, 29(3), 275-283.
- Saleem, M., Tufail, M. W., Atta, A., & Asghar, S. (2015). Innovative workplace behavior, motivation level, and perceived stress among healthcare employees. *Pakistan Journal of Commerce and Social Sciences*, 9(2), 438-446.
- Scott, S. G., & Bruce, R. A. (1994). Determinants of Innovative Behavior: A path model of Individual Innovation in the Workplace. *Academy of Management Journal*, 37(3), 580-607.
- Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York: Doubleday.
- Seubert, C., Hornung, S., & Glaser, J. (2017). *Examining the role of self-leadership in an integrated model of work characteristics and health-related outcomes*. Paper presented at the International conference on applied human factors and ergonomics.
- Soh, W. G., & Ali, M. B. (2021). Bibliometric Analysis of Learning Organization. *Journal of Contemporary Issues in Business and Government*, 27(1), 794-818.
- Stewart, G. L., Courtright, S. H., & Manz, C. C. (2011). Self-leadership: A multilevel review. *Journal of Management*, 37(1), 185-222.
- Stewart, G. L., Courtright, S. H., & Manz, C. C. (2019). Self-leadership: A paradoxical core of organizational behavior. *Annual Review of Organizational Psychology and Organizational Behavior*, 6, 47-67.
- Strauss, C., & Quinn, N. (1997). *A cognitive theory of cultural meaning*. London: Cambridge University Press.
- Sung, W., & Kim, C. (2021). A study on the effect of change management on organizational Innovation: Focusing on the mediating effect of members' innovative behavior. *Sustainability*, 13(4), 1-25.
- Szabla, D. B., Pasmore, W. A., Barnes, M. A., & Gipson, A. N. (2017). *The Palgrave handbook of organizational change thinkers*: Springer.
- Teng, C. C., Hu, C. M., & Chang, J. H. (2020). Triggering creative self-efficacy to increase employee innovation behavior in the hospitality workplace. *The Journal of Creative Behavior*, 54(4), 912-925.
- Tierney, P., & Farmer, S. M. (2002). Creative self-efficacy: Its potential antecedents and relationship to creative performance. *Academy of Management Journal*, 45(6), 1137-1148.
- Wang, S., Liu, Y., & Shalley, C. E. (2018). Idiosyncratic deals and employee creativity: The mediating role of creative self-efficacy. *Human Resource Management*, 57(6), 1443-1453.

- Widyani, 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.
- Yidong, T., & Xinxin, L. (2013). How ethical leadership influence employees' innovative work behavior: A perspective of intrinsic motivation. *Journal of Business Ethics*, 116(2), 441-455.
- Zhang, J., Wang, Y., Chu, Y., & Xu, X. (2011). The effects of three pressures and creative self-efficacy on creativity. *Journal of Psychological science*, 34(4), 993-998.
- Zhao, G., Luan, Y., Ding, H., & Zhou, Z. (2022). Job Control and Employee Innovative Behavior: A Moderated Mediation Model. *Frontiers in Psychology*, 13, 720654.
- Zheng, J., Wu, G., & Xie, H. (2017). Impacts of leadership on project-based organizational innovation performance: The mediator of knowledge sharing and moderator of social capital. *Sustainability*, 9(10), 1-22.
- Zhou, H., & Long, L.-R. (2011). Effects of job insecurity and creative self-efficacy on employees' creativity. *Acta Psychologica Sinica*, 45(3), 929-940.