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Impact of Organization Learning Processes on Organizational Effectiveness: The Moderated Mediation Analysis

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ABSTRACT: The Telecom Sector of Pakistan is one of the most competitive sectors, and high competition reduces companies' margins. The only survival in such a competitive environment is effective; however, it is very difficult to become effective without value-added means such as 'learning.' Learning is antecedent of effectiveness; however, it becomes more fruitful if this learning is channelized to innovate while considering influencing factor such as work attitude of employees. To address the literature gaps, this study intends to empirically check the relationship of mentioned variables among cellular firms in Pakistan's local context, which has merely been check earlier. Moreover, there is also a gap in the existing knowledge regarding the operationalization of Organizational Learning, as highlighted by Argote, and it needs the incorporation of cognitive and behavioral aspects. A random questionnaire survey method has been adopted to collect the data from the targeted sample. Data has been analyzed by testing Regression analysis - moderated mediation analysis of Andrew Hayes (2014) and Structural Equation Modeling. The results indicate thatorganizational learning processeshave a positive impact (with mediation impact of organizational innovation) on organizational effectiveness that is further positively moderated by work attitude. Hence, to innovate, organizations have to make their employees learn continually, making it effective. This study recommends future researchers further enhance work by exploring learning's relationships with service innovation success and overall business model, especially in underdeveloped regions of the globe.

Keywords: Organization Learning Processes;Innovation; Organizational Effectiveness; Strategy

I. INTRODUCTION

The world has become a global village where the desired products and services can be acquired through digital media from any corner of the world on clicks.Competition is no more limited to regions or specific local markets, but it's global now. It highlights the need for the organization to strengthen its positions in such a competitive environment; furthermore, advancements in technology and cultures have changed businesses' traditional dynamics. Profit margins are squeezing, and the desire for a bigger piece of market share has become a challenge for organizations. To satisfy their clients' organizations, they have toachieve effectivenessby bringing newness in their products and services [24]. Hence, to cope with markets' current dynamics, organizations have to learn daily.Organizations have to develop skills and knowledge by learning otherwise;, their survival will become very hard [20].

Researchers have explained the learning in several ways according to their studies' context [3]. However, it is crucial to mention that the existing body of knowledge lacks a consensus onthe definition of organizational learning processes. Although the concept of organizational learning is attractive for the researchers, it is also equally beneficial for the practitioners [19]. The construct of organizational learning is mostly misinterpreted with the learning organization's construct [50]. This further indicates the gap in the existing literature of the body.

Learning is one of the core elements in enabling effectiveness [55] however, in the past least focus was given by practitioners to use learning as a tool for enhancing effectiveness [24, 51]. Moreover, the construct of organizational innovation has also evolved incrementally over time as researchers have operationalized the same in a different perspective from time to time. Different researches have studied the concept of innovation with respect to different parameters. Generally, organizational innovation has been defined as espousing the firm's new product [59]. But the existing literature on organizational innovation still pertains to some gaps that are elaborated in details in consequent paras;

The literature review of organizational sciences revealed that there might be some relationship between the organizational learning processes and organizational innovation. Firms that possess a very strong learning culture emphasize the acquisition of new information from relevant sources. The acquired information is then converted into meaningful knowledge that is interpretable as the information holds the raw form. This interpretable information may then be transformed into

actions. This mechanism's degree of strength reflects the organization's strength of organizational learning [52]. Organizations with strong organizational learning processes possess innovative performance, but it is crucial to state that the existing body of knowledge holds some gaps in the operationalization of the construct, i.e., learning processes [6, 51]. The existing body of knowledge has only taken into view the aspect of preservation of acquired knowledge in terms of organizational memory. However, the literature lacks the integration of newly acquired knowledge in the cognitive aspect,and then thetransformation in behaviors due to this newly acquired knowledge still needs attention [6]. It is pertinent to mention that the fundamental concept of learning without a relatively permanent behavior change is incomplete. Thus, cognitive change and behavioral change are the two parameters that are further considered and incorporated in organizational learning's operationalization [6].

The review of existing literature on the innovation domain has also revealed that the gap exists in the conceptualization of organizational innovation [12, 28, 31]. Severalpieces of research have explored the different determinants of innovation among the firms operating in different segments and contexts, but there are very few researchers who have attempted to validate the conceptualization for the consensus [9, 12, 28]. This statement could support it that the whole body of innovation literature comprises three distinguishable strands of knowledge. The first aspect explainsthe firm's newly launched products or services' structural characteristics, mainly their technical processes [36, 57].

The second aspect focuses on the firm's macro-level determinants, such as the technological changes, external environmental factors, and the new emerging market dynamics that consequently bring innovation within the firm [33, 34, 38, 47]. The third aspect focuses on the firm's micro-level factors that determine the newness in product or service or process throughout the organization from the emergency phase to maturity phase [2, 8]. However, investigating the concept of innovation in terms of outcome found to be the weakest link in the existing body of knowledge [28], that may be termed as a gap in the literature. It is also essential to state that there is a need to bring coherence toconceptualization [31]. As the present research has investigated, conceptualization in different manners with different segments or contexts [25, 28, 35].

Table 1: Summarizing the Identified Gaps of literature and Mechanism to address these Gaps.

Nature of Gaps	The mechanism to address the Gap
Gap – 1 : Organizational learning process further needsenhancement in its conceptualization [5,10].	A self-administer research instrument is developed. Since the constructs have not been used before in a local context, exploratory factor analysis will be conducted to check the validity measures. In order to endorse these sub-constructs, confirmatory factor analysis will also be conducted to confirm the underlying sub-constructs and their interrelationship (if any).
Gap – 2 : The three-dimensional construct of organizational innovation needs to be validated [9, 16, 28, 31].	The concept of organizational innovation will be validated by further validating the adapted research instrument. The instrument's psychometric properties were tested by conducting reliability, construct validity, and discriminate validity. Confirmatory factor analysis will also be conducted to validate the relationship (if any) of underlying sub-constructs.
Gap – 3 : There is a need further to understand the empirical relationships of innovation and innovation outcomes. Furthermore, future research is needed to validateorganization innovation's mediation effect in different segments or sectors. [16, 58].	Hypothesis 4 is formulated to fill this identified gap. Hypotheses 1, 2, and 3 are also made in foundational support of hypothesis 4. Hypotheses testing will be made to address this identified gap.
Gap – 4 : There is a need to explore the other possible variables affecting the interrelationship among learning innovation and effectiveness. In-depth empirical studies are needed to focus on different case studies, different countries, and segments and sectors. Furthermore, future research is needed to check the effects of different context factors such as motivation to examine how motivation alone and other factors influence organizational learning and its consequents. Future research also needs to investigate this effect by considering the mediating and moderating aspects [5, 15, 58].	Hypotheses 5, 6 and 7 are formulated to fill these identified gaps. Hypotheses testing will be made to address these literature gaps.

It is also essential to state that there is a need to further investigate the outcomes of innovation in performance or effectiveness [9]. Thus, there arises a need for future research that may bring homogeneity in innovation surveys [13, 39, 48]. Costa and Monteiro (2016) also argued that although organizational innovation is the most widely researched area,their systematic review of innovation literature revealed that presently very broad and wide conceptualizations of organizational innovation are used in literature. Thus, it is essential to validate the determinants of innovation and to establish further understandings on the empirical relationships of innovation and innovation outcomes [16, 39, 61]. The review of the existing literature has also revealed that there is a possible association of organizational learning on organizational effectiveness. However, some researchers have pointed that this effect of learning on effectiveness may further be investigated by considering some undercover links of mediation and moderation aspects [6, 45, 49, 58]. Accordingly, the literature gaps identified can be summarized as in Table 1.This research contributes tothe body of literature by attempting to validate the existing conceptualization of innovation in terms of outcome [28]. This research study has used the research instrument developed by Skerlavaj (2010) [52] based on the conceptualization laid by Popadiuk and Choo (2006) [44]. Some of the researchers have called for future research to validate the concept of organizational innovation with an objective to establish homogeneity in the conception of a variable across different cultural settings. Few researchers have attempted to validate this research instrument in the cultural setting of different countries and sectors, but negligible or no research study has been conducted for the validation of this instrument in the context of Pakistan. Consequently, this work contributestothe existing literature by validating the research instrument developed by Skerlavaj (2010) on Popadiuk and Choo's conceptualization (2006). Secondly, this research work attempts to contribute tothe existing literature by extendingthe operationalization of Argote's (2011) with the addition of two dimensions of cognitive change and behavioral change in line with the three dimension's indicated by Argote (2011) knowledge acquisition, knowledge transfer and knowledge retention. This research contributes to the body of knowledge by empirically testing the proposed theory of Argote (2011) [5]. Six research questions are formulated to address these identified gaps;

i. What arethe determinants of learning processes and innovation in Pakistan's cultural context?
ii. To what degreeorganizational learning processes impact effectiveness and innovation?
iii. To what degree the innovationpossess the mediation effect between learning and effectiveness?
iv. To what degree the work attitudepossess the moderation effect between learning and innovation?
v. To what degree the work attitude possess the moderation effect between learning and effectiveness?
vi. To what degree the organizational learning processes possess anindirect effect on effectiveness through the mediation effect of innovation that is further positively moderated by the work attitude?

II. LITERATURE REVIEW

Several earlier kinds of research have already explored the association of learning with the firm's overall effectiveness and found it to be consistent. It is not wrong to state that learning is essential for bringing effectiveness at the organizational level. The organizations who strive better to understandtheir internal and external environment through learning would perform better than those weak in learning. It occurs because some of the essential factors (such as growing demands of the customer, technological advancement, competition, changing dynamics of the industry, etc.) are in a continuous state of change, requiring the organization to keep on continuous learning. In this regard, the first hypothesis is proposed as;

H1:*Organizational learning processes possessa positive effect on effectiveness.*

The literature review has also revealed that organizational learning will enhance innovation among organizations operating in the same market condition for a long time [8]. Literature has also disclosed that organizational learning triggers new ways of performing tasks [21, 38, 41]. This further increases an employee's potential to understand the events, mechanisms, and implement so that the organization's internal cultureis staged for the foundationof organizational innovation. The mechanism of innovation starts from the conception of a new idea and completes this new idea's successful launch in the form of some new product or new service. The whole progression from the conception of a new idea to the new product's launch essentially requires learning.In light of these arguments, hypothesis two is articulated as;

H2: *Learning processes possessa positive effect on innovation.*

Organizational innovation is considered one of the medium through which a firm can safeguard its survival by responding to the external environment's prevailing changes [42]. It is the extent of innovation within the organization that commences the launch of new services and products to attain effectiveness in competitive contexts [60]. Generally speaking, the employees are the foundational unit of an organization, and the positive interaction of employees' inflexible and facilitative nature of the environment further flourishes the sharing of knowledge. Consequently, new ideas and insights about their daily routine processes, the outcome product or service, and new or improved capabilities have emerged. This further opens new avenues for innovation within the organization. In this regard, another research hypothesis three is proposed as follows;

H3: *Innovation possesses a positive effect on effectiveness.*

Costa and Monteiro (2016) argued that although organizational innovation is the most widely researched

area. However, their systematic review on innovation literature revealed that presently very broad and wide conceptualizations of organizational innovation are used in literature. It has also been found that the validation of the mediation impact of innovation among the relationship of learning processes and effectiveness also requires further empirical evidence from the different segments and cultural contexts [58]. Thus there is a need to validate the concept of organizational innovation (Gap-2 of this research study), and there is a need to establish further understandings on the empirical relationships of innovation and innovation outcomes (Costa and Monteiro, 2016). Keeping in view the literature gap identified by Ugurlu and Kurt (2016) and Costa and Monteiro (2016), this identified gap is addressed by the formulation of hypothesis 4 as;

H4: *Innovationpossesses the mediation effect on the association of learning and effectiveness.*

It is pertinent to mention here that the impact of work attitude as a moderating variable in the relationship between organizational learning, innovation, and organizational effectiveness is one of the newest proposals to emerge in organizational studies research as no or negligible work has been found on the moderation impact of work attitude on the association between organizational learning processes, innovation and organizational effectiveness duringthe review of the literature.

Generally, management plays an essential part in determining the employee's interest ininnovation [43]. The review of existing literature also revealed that employee motivation levels are greatly involved in affecting the overall innovation across the organization [5]. Thus, it can be argued that there may subsistany possible association between the employee motivation level, involvement towards the job, and overall innovation that may be further investigated (Said, 2016). There is also a need to investigate further the underlying factors impacting learning and effectiveness through mediation and moderation analyses [58]. Argote (2011) has also called for future research on the effects of these context factors such as motivation to examine how motivation alone and other factors influence organizational learning and its consequents. Keeping in view the gap identified by these previous researches, this study also attempts toclose these literature gaps by exploring the moderating effect of work attitude on the association of learning processes and organizational innovation. The literature support for the possible association of constructs further probes the research hypothesis 5 of this study as;

H5: *Work attitude possesses the moderation effect on the association of learning and innovation.*

Humans are different based on demographic and personal factors, and different humans possess different work behaviors. Generally, it is not wrong to state that each organization possesses employees with different work-related attitudes. Some employees may be very keen on their work, or others may not be. This may highlight the importance of context [5]. The context in which the organization or the individuals are operating shapes the employees' motivation and attitude (Argote, 2011). Consequently, it may lead to an interruptive or boosting effect on the learning and innovation across the organization [5]. It also further influences individual or organization performance levels [5].

It is also crucial to pin-point that a researcher Argote (2011), has called for future research on the effects of contextual factors (such as motivation alone and incombination with other factors) on the consequents of organizational learning. Thus, this probes the research hypothesis 6 of this study that may investigate the impact of work attitude on the association of learning and proposed consequential factors (such as effectiveness).

H6: *Work attitude possesses the moderation effect on the direct association of learning and effectiveness.*

The bottom line of the whole literature review portion of this research work postulates that six testable research hypotheses have been derived on the basis of past research work and in search of answers to the literature gap identified by these previous research works. This research work's newness and contribution can also be evident by the mechanism used in this research to address the identified literature gaps, as summarized in table 1.

The formation of six testable research hypotheses with an objective to address the mentioned gaps. It consequently paves the way towards the formation of the proposed theoretical framework of this research work. The proposed theoretical framework illustrates that the organizational learning processes effect organizational effectiveness in two manners, (i) direct impact on the effectiveness and (ii) indirect impact on effectiveness. The direct impact of learning on effectiveness is the simplest path that may be tested through the already developed research hypothesis 1. However, the indirect impact of learning on effectiveness routes through mediation impacts innovation and simultaneously along with a work attitude's moderation effect. This indirect effect is represented in diagram form (figure 3.1) as the proposed theoretical framework of this research work and needs to be tested. Hence, research hypothesis 7 has been developed to testify the proposed theoretical framework, articulated as follows:

H7*: Learningprocesses possessa positive effect (withthe mediation effect of innovation) on effectiveness that is further significantly moderated by the work attitude.*

III. METHODOLOGY

A. Operationalization and Instrument Development

This research has operationalized the independent variable,i.e., organizational learning processes,into five sub-constructsof knowledge acquisition, knowledge transfer, knowledge retention, cognitive change, and behavioral change. Thirty-six items have been adopted to measure learning processes from the validated measures of existing studies [18, 52, 54, 59]. The concept of innovation has been operationalizing into three sub-constructs of technological innovation, administrative innovation, and market innovation. This study has adopted the items developed by Popiduk and Choo (2006) and further validated by different

researchers [46], Skerlavaj *et al.,* (2010) to measure innovation [52]. The internal reliability reported by Salim and Sulaiman (2011) was 0.96, while Skerlavaj *et al.,* (2010) reported the internal reliability as 0.92. This study has adopted these validated items as they are used with no changes. The dependent variableorganizational effectiveness is operationalized with six sub-constructs of market effectiveness, strategic leadership, organizational climate, employee satisfaction, product or service quality, and cohesiveness [56]. It is pertinent to mention; this study has adopted the original validated scale of [14, 17, 32, 56]. Work attitude is operationalized into two sub-constructs of motivation to perform and job involvement measured with six items scale. These six items are adopted from Katou and Budhwar (2006) study, [26, 27]

After finalization, the research questionnaire was discussed with three Ph.D. faculty members to get an expert opinion from an academic perspective. Later on, the same was vetted by two reputable practitioners of director-level positions of the telecom sector to ensure the relevancy and appropriateness of research instruments in terms of understandability.

B. Population and Data Collection

This study's units of analysis constitute the functional managers, middle managers, and knowledge workers of five cellular companies of Pakistan that are Ufone, Mobilink, Zong, Warid, and Telenor. The population frame comprises approximately 7280 units of these three levels of employees. Using the Krejice and Morgan (1970) explained mathematical calculation for the finite population, the minimum sample size requirement is 364; however, 458 filled questionnaires were filled from the mentioned target sample. The respondents are selected by using a simple random sampling strategy [30].

The three levels of employees are selected because the variables of this research work are best reflected among them. The literature also supports that managers play a crucial role in engaging employees towards innovation and learning. They serve as the origin for effective implementation and adoption of learning and innovation within the organization [5, 11, 43]. Furthermore, the knowledge workers are the one who coordinates the activities and plans of middle and functional managers to operational employees. Thus, the knowledge workers also play a crucial part in regulating learning processes, innovation activities, and employees' motivation. Therefore, this research study has opted for the middle managers, functional managers, and knowledge workers as a unit of analysis to study the important constructs of organizational learning, organizational innovation, and work attitude.

IV. RESULTS & FINDINGS

A. Demographic Analysis

The results of the demographic analysis revealed that 137 of the total (458) respondents were female (representing 29.91 percent), while the remaining 321 respondents were male (70.08 percent). Similarly, it was found that the six respondents were aged below and 25 years (1.31 percent); 198 respondents were aged between 25 to 35 years (43.23 percent); 209 respondents were aged between 36 to 45 years (45.63 percent), and the remaining 45 respondents are of aged above 45 years (9.82 percent).

B. Validation of Research Instrument

This research study has used the exploratory - confirmatory approach by following the paradigm applied by the previous researcher Koufteros (1999) to validatethe research instrument and evaluate measurement models (inclusive but not limited to the structural relationship among research constructs). According to Koufteros (1999) approach, the exploratory factor analysis is conducted with an objective to get some initial insights into dimensionality aspects of research constructs from the collected data. For the further purification of scales, the items with poor loadings are eliminated from further analysis. However, it is crucial to state that exploratory factor analysis is not the explicit test for the uni-dimensionality [4]; therefore, confirmatory factor analysis is also used in light of Koufteros (1999) approach. The reliability of the constructs is measured after the exploratory factor analysis. Afterward, the discriminate validity and average variance extracted are calculated. The exploratory factor analysis results, composite reliability, average variance extracted, and confirmatory factor analysis are shown in Table 2.

Table 2: Results of EFA, CFA, Reliability, and AVE.

Construct	Sub – Constructs	Item no	EFA Results		Reliability after extraction	CFA Results		AVE values
			Factor Loading	Items removed		Factor Loading	Fit Index	
Learning processes	Knowledge Acquisition	1 2 3 4 5 6 7 8 9 10 11 12	.936 .933 .942 .886 .856 .848 .742 .757 .687 .733 .860 .861	Seven Item i.e. 13, 17, 21, 24, 28, 30 and 35 will be removed due to low factor loadings in further analysis	.810	.97 .92 -- .83 .79 .83 .85 .87 .82 .77 .98 .98	CMIN / df = 1.72 P = .100 AGFI = .94 CFI = .952 TLI = .969 NFI = .972 RMSEA = .061	.705
	Knowledge	13	.057		.739	--		.768

	transfer	14 15 16 17 18 19 20	.918 .813 .913 .151 .921 .903 .840			-- .97 .94 -- .97 .92 .88		
	Knowledge retention	21 22 23 24 25 26	.066 .680 .870 .007 .896 .854		.936	-- .83 .94 -- .97 .87		.688
	Cognitive change	27 28 29 30 31	.775 .287 .893 .033 .884		.942	.89 -- .98 -- .91		.727
	Behavioral change	32 33 34 35 36	.913 .936 .928 .063 .929		.966	.89 .95 .88 -- --		.857
	Total	**36**	**--**	**7**	**.852**	**--**	**--**	**.749**
Innovation	Product Innovation	37 38 39 40	.021 .794 .941 .939	Five Item i.e. 37, 47, 51,52 and 56 will be removed due to low factor loadings in further analysis	.812	-- .75 .98 --	CMIN / df = 1.57 P = .101 AGFI = .973 CFI = .994 TLI = .992 NFI = .985 RMSEA = .034	.758
	Process Innovation	41 42 43	.948 .934 .953		.974	.93 -- .98		.903
	Structure Innovation	44 45 46	.917 .869 .909		.819	.91 .90 --		.798
	Cultural Innovation	47 48 49 50 51	.088 .859 .825 .853 .102		.900	-- .95 .94 .89 --		.715
	Market Innovation	52 53 54 55 56	.050 .799 .878 .870 .367		.885	-- .83 .84 .89 --		.722
	Total	**20**	**--**	**5**	**.776**	**--**	**--**	**.779**
Organizational Effectiveness	Market Effectiveness	57 58 59	.798 .842 .840	Three Item i.e. 63,68 and 69 will be removed due to low factor loadings in further analysis	.914	.74 .91 .89	CMIN / df = 2.2 P = .40 AGFI = .952 CFI = .973 TLI = .961 NFI = .960 RMSEA = .064	.684
	Strategic Leadership	60 61 62 63	.851 .869 .807 .181		.891	.84 .94 .89 --		.710
	Cohesiveness	64 65 66	.867 .790 .858		.921	.86 .94 .98		.704
	Organizational Climate	67 68 69 70 71	.818 .110 .099 .837 .822		.900	.96 -- -- .94 .89		.682
	Product or Service Quality	72 73 74	.826 .821 .832		.964	.87 .92 .84		.683
	Satisfaction	75	.870		.910	.89		.737

		76 77	.888 .815			.91 .83		
	Total	**11**	**--**	**3**	**.893**	**--**	**--**	**.700**
Work Attitude	Motivation	78 79 80	.893 .803 .895	No item removed	.886	.95 .98 .96	CMIN / df = 1.69 P = .30 AGFI = .984 CFI = .992 TLI = .978 NFI = .988 RMSEA = .062	.748
	Job Involvement	81 82 83	.888 .817 .838		.908	.84 .98 .96		.719
	Total	**6**	**--**	**0**	**.803**			**.733**

The exploratory analysis results revealed that all the research instrument items' factor loadings possess acceptable values above 0.6 [22]. However the factor loadings of total fifteen items namely 13, 17, 21, 24, 28, 30, 35, 37, 47, 51, 52, 56, 63, 68 and 69 were found to below the 0.6. Therefore these items were eliminated from the final validated research instrument. Furthermore, the correlation matrix generated in exploratory factor analysis revealed that some inter items' correlation value is higher than 0.7. It showed that there exists the multi-collinearity among the items 3-2, 16-14, 36-34, 40-39, 42-41, and 46-44 with the correlation value of .897, .945, .807, .992, .874 and .784. Therefore in addition to the fifteen items (13, 17, 21, 24, 28, 30, 35, 37, 47, 51, 52, 56, 63, 68 and 69) with negligible loadings, six items (3, 14, 36, 40, 42 and 46) with highest correlation values are also eliminated. The overall result of exploratory factor analysis was found to be satisfactory. The summarized results of factor analysis are mentioned below in Table 3.

All the research constructs' composite reliability was also checked and found to be in acceptable ranges that are above 0.6. The confirmatory factor analysis was also conducted, as shown in Table 2. The results reflect that all the factor loadings of the items fall in the acceptable range.

Table 3: Summary of Factor Analysis.

Variable	Content and Sub-Measures	Total Items	Items Removed			Items retained in subscale
			With no loadings	High correlation	Total	
Learning processes	Knowledge Acquisition	12	0	1	1	11
	Knowledge Transfer	8	2	1	3	5
	Knowledge Retention	6	2	0	2	4
	Cognitive Change	5	2	0	2	3
	Behavioral Change	5	1	1	2	3
		36	7	3	10	26
Organizational innovation	Technological Innovation	7	1	2	3	4
	Administrative Innovation	8	2	1	3	5
	Market Innovation	5	2	0	2	3
		20	5	3	8	12
Organizational effectiveness	Market Effectiveness	3	0	--	0	3
	Strategic Leadership	4	1	--	1	3
	Cohesiveness	3	0	--	0	3
	Organizational Climate	5	2	--	2	3
	Product and Service Quality	3	0	--	0	3
	Satisfaction	3	0	--	0	3
		21	3	--	3	18
Work attitude	Motivation to Perform	3	0	--	0	3
	Job Involvement	3	0	--	0	3
		6	0	--	0	6
Demographics		5	--	--	0	5
Total Items		**88**	**15**	**6**	**21**	**67**

In addition, it was also found that all the research constructs possess the good model fitness with the CMIN / df ratio less than 3, p-value greater than 0.5, adjusted goodness-of-fit index (AGFI) value greater than 0.9, comparative-fit-index (CFI) value greater than 0.9, normed-fit-index (NFI) value greater than 0.9 and the Tucker-Lewis-coefficient (TLI) value greater than 0.9 and the bad model fitness index RMSEA value less than .08. Overall, the results of confirmatory factor analysis are found satisfactory. The average variance extracted of all research constructs is also calculated and found satisfactory. The research instrument's discriminate validity analysis was also tested through the Pearson correlation statistical test. The results are shown in Table 4. It was found that all the sub-constructs of variables possess a weak relationship with each other. It refers that all the sub-constructs are distinguishable from each other. Thus, the overall result of discriminate validity was also acceptable.

C. Hypotheses Testing

Testing Hypothesis One. One of the assumptions for data normality is checked by validatingthe ratio of population distribution symmetry-peakedness, which is represented by the value of skewness and kurtosis of the population [22]. Generally, the value of skewness and kurtosis should be between 1 and -1. Results mentioned in table 5 reflect that data is normally distributed.

Table 4: Discriminate Validity Analysis of Sub-Constructs.

Variable	Dimensions	1	2	3	4	5	6
Learning processes	(1) Knowledge Acquisition	1					
	(2) Knowledge Transfer	.063 .000	1				
	(3) Knowledge Retention	.224 .387	.069 .125	1			
	(4) Cognitive Change	.181 .000	.171 .000	.035 .436	1		
	(5) Behavioral Change	.205 .000	.016 .226	.378 .000	.137 .002	1	
Innovation	(1) Product innovation	1					
	(2) Process innovation	.274 .000	1				
	(3) Structural innovation	-.037 .406	-.052 .245	1			
	(4) Cultural Innovation	.391 .000	.369 .000	-.047 .300	1		
	(5) Market Innovation	.249 .000	.013 .076	-.011 .204	.353 .000	1	
Organizational Effectiveness	(1) Market Effectiveness	1					
	(2) Strategic Leadership	.261 .000	1				
	(3) Cohesiveness	.346 .000	.280 .000	1			
	(4) Organizational climate	.391 .000	.359 .000	.271 .000	1		
	(5) Product or service quality	.274 .000	.138 .002	.350 .000	.369 .000	1	
	(6) Satisfaction	.185 .000	.211 .000	.240 .000	.192 .000	.297 .000	
Work Attitude	(1) Motivation	1					
	(2) Job Involvement	.215 .000	1				

Table 5.

Variables	Skewness	Kurtosis
Organizational Learning processes	.123	.229
Organizational innovation	.034	.254
Organizational effectiveness	.162	.000
Work attitude	.034	.126

Testing Hypothesis One. Hypothesis one was checked through simple regression analysis in which the criterion variable organizational learning was regressed against the dependent variable organizational effectiveness. The results are shown in Table 6. The result showed that the 55.30 percent of variance on the dependent variable (effectiveness) was predicted by criterion variable (learning) with the significant value of .000 < 0.05. This evidences that there possess a positive effect of learning on organizational effectiveness. Thus, hypothesis one stands valid.

Testing Hypothesis Two, Three, and Four. Hypothesis four (relating the mediation effect of innovation on predictor criterion variable relationship) was tested using the model 4 template of the regression-based process approach of [23]. The results are shown in Table 7. It was found that standardize coefficient value of .7072 indicates that if we change one unit in learning, it will bring 07072 units to change in innovation with a significantp-value of .001 (that is less than .05) with the t-value of 13.83 (that is greater than 2). This result proves that there exists a positive impact of learning on innovation. Hence, hypothesis two is accepted.

Table 6: Total effect of Criterion on Predictor variable.

Variable	Coefficient	S.E	T	P
Constant	.651	.144		
Learning	1.196	.048	24.786	.000
	R^2 = 0.553, F (1, 456) = 614.3, p = 0.001			

Table 7: Mediation Effect of Innovation on IV-DV relationship.

Antecedent	Innovation				Effectiveness			
	Coefficient	SE	T	P	Coefficient	SE	T	P
Constant	.8290	.1522	5.44	.001	1.221	.1016	12.00	.001
Learning	.7072	0.051	13.83	.001	.7108	.0390	18.20	.086
Innovation	--	--	--	--	.6862	.0291	23.56	.001
	R^2 = 0.5894; F (2, 455) = 927.9; p = 0.001 Total Effect = .1.195, t = 35.3, p = .001 Direct Effect = .710, t = 1.82, p = 0.086 Indirect Effect = .4853							

It was also found that 58.94 % of the variance in the dependent variable (effectiveness) was predicted by both the independent (learning) and mediating variable (innovation). The results also reflect that this impact of innovation on the effectiveness is significant with a p-value of .001 (that is less than .05) at a t-value of 23.56 (greater than 2) coefficient value of 0.6862. Hence, this proves hypothesis three as correct.

It was also found that the direct effect of learning on effectiveness is not significant with the value of .710, t-value of 1.8 < 2 and p-value is .086 > .05. This non-significant result indicates the full mediation effect of organizational innovation on learning processes and organizational effectiveness relationship. The total effect and indirect effect were also significant with the effects of 1.195 and .4853 with the p-value of .000, which is less than 0.05. Thus, these results support hypothesis four as accepted.

Testing Hypothesis Five. The moderation effect of work attitude on independent and mediating variables was tested using the template model 1 of Hayes (2014). The result of the moderation effect is shown in table 8. The results showed that 61.72 % of organizational innovation variance is predicted by the independent, moderating variable and interaction of independent – moderating variable with the p-value of .000 < .05. The results also reflected that the learning processes positively affect .7372 on the mediating variable with t-value of 5.09 and p-value of .000< .05. Similarly, results also reflects that the moderating variablehas the significant effect of .365 oninnovation with t-value of 2.95> 2 and p-value of .003 < .05. The term “int_1” refers to the interaction effect of learning processes and work attitude and it also possesses the significant effect of .0956 on innovation with the t-value of 2.33> 2 and p-value of .019< .05. Thus, these results supportthe hypothesis five as accepted.

Testing Hypothesis Six. Hypothesis six explains the moderation effect of work attitude (in the presence of mediator) on the learning processes and effectiveness relationship when the innovation is regarded as constant. The results are shown in Table 9. It was found that 75.15 % of the predictor variable variance can be described by the criterion variable and the moderator variable with the p-value .001. The results also showed that the moderating variable's effect is also significant onthe dependent variable with the p-value .001; t-value of 4.44; and coefficient value of 0.410. It was also found that the effect of criterion variable on a predictor variable is significant with the p-value of 0.001; t-value of 3.98 and coefficient value of 0.4303.

Table 8: Testing the Moderation Effect of Work Attitude on IV-MV relationship.

Antecedent	Innovation					
	Coeff.	SE	T	P		
Constant	3.122	.387	8.052	.000		
Work Attitude	.365	.123	2.95	.003		
Learning	.7372	.144	5.09	.000		
Int_1	.0956	.0409	2.33	.019		
	R^2 = 0.6172, F (3, 454) = 265.4; p = 0.001					

Table 9: Testing the Moderation Effect on IV – DV Association.

Antecedent	Effectiveness					
	Coefficient	SE	T	P		
Constant	1.9319	.2897	6.668	.000		
Work Attitude	.4109	.0924	4.446	.000		
Learning	.4303	.1080	3.982	.001		
Int_1	.1079	.0306	3.530	.005		
R^2 = 0.7515; F (3, 454) = 944.1; p = 0.001						

The interaction term "Int_1" refers to the combinational effect of criterion and moderating variable in explaining the predictor variable. It also has asignificant positive effect with the p-value of .005; a coefficient value of 0.1079; and t-value of 3.53. From these results, it can be claimed that the moderating variable work attitude positively strengthens the association of criterion and predictor variable. Thus, hypothesis six also stands to be correct.

Testing Hypothesis Seven. Hypothesis seven explains the testing of this research work's whole research framework. For testing hypothesis seven, model template 8 of Hayes (2014) process approach is used. The results are shown in Table 10. The results showed that 77.50 % of the variance on a dependent variable (effectiveness) is described by the learning, innovation, work attitude, and interaction effect of work attitude and learning with the p-value of 0.001. Thus, it supports hypothesis seven as accepted.

D. Testing Model Fitness of Hypothesized Research Framework through SEM

This research has used structural equation modeling for the research framework's overall model fitness testing. The model fitness indices are shown in Table 11.

These results showed that this work's research framework possesses a good model fitness with the CMIN / df ratio of 2.95< 3 with the non-significant p-value of .063 > .05. The comparative fit index (CFI) is found to be .981, the value of Tucker Lewis coefficient (TLI) is .919, the value of the normed fit index (NFI) is .973, the value of goodness fit index (GFI) is .962, and the value of adjusted goodness fit of an index (AGFI) is .959 and the value of RMSEA is.047. These all results of model fix indices indicate the good fitness of this study's research framework.

Table 10: Testing the Hypothesized Research Model.

Antecedent	Innovation					Effectiveness) Main Model				
	Coeff.	SE	T	P		Coeff.	SE	T	P	
Constant	3.122	.3877	8.05	.000		1.003	.2829	3.54	.000	
Work Attitude	.3659	.1237	2.95	.003		.3020	.0856	9.63	.000	
Learning	.7372	.1446	5.09	.000		.2110	.1018	2.07	.038	
Innovation	--	--	--	--		.2975	.0309	3.52	.000	
Int_01	.0956	.0409	2.33	.019		--	--	--	--	
Int_02	--	--	--	--		.0794	.0282	2.81	.005	
	R^2 = 0.7750; F (4, 493) = 863.09; p = 0.001									

Table 11: Checking the Model Fitness of Research Framework.

Fitness Measures	Value Found	Desired value	Model Fitness
CMIN/df	2.95	< 3	Fit
CFI	.981	> .95	Fit
TLI	.919	> .90	Fit
NFI	.973	> .95	Fit
RMSEA	.047	< .08	Fit
GFI	.962	> .95	Fit
AGFI	.959	> .90	Fit
PCLOSE	.637	> .5	Fit
SRMR	.059	< .08	Fit
Whereas CMIN = 17.70 , df = 6, p value = .063			

V. CONCLUSION

This study's results reveal that the organizational learning processes, work attitude, and organizational innovation are termed as key precursor elements for the attainment of overall effectiveness in the organization. From the results, it is also derived that innovation possessesasignificant mediation effect on the direct association of learning and organizational effectiveness. The association between all four constructs is positive and significant.One of the objectives of this research study was to enhance the operationalization of organizational learning processes by incorporating cognitive and behavioral changes in construct dimensions. After the addition of mentioned two dimensions in the construct, it was empirically tested in the local context, and it was found that both dimensions are suitable for the operationalization of organizational learning processes. Moreover, it was aimed that after incorporation of dimensions in the construct, it will be explored that how learning impacts innovation.

This study's findings reflect that learning hasa significant impact on innovation. If an organization desires to enhance innovation, it has to enhance its organization's learning processes. Furthermore, if an organization wants to enhance its effectiveness, it will have to improve its learning processes. Hence, this research work concluded that acquiring, transferring, and retaining new knowledge for bringing the permanent change in cognition and behaviour in an organization that nurtures overall learning may pave the path for increased innovation and enable the organization to achieve the effect. However, it occurs if the organization can regulate the employee motivation with higher devotion and involvement with their assigned jobs wholeheartedly.

PRACTICAL IMPLICATIONS

This research suggests that the practitioners of cellular companies should create an environment in an organization that shall involve employees for creating new knowledge and work to improve learning among employees as increased learning will bring innovative culture in their organizations. In addition to the creation of a learning culture in an organization, it must be realized that internal customers,i.e., employees are the ones who generate, use, and preserve the knowledge; therefore, it is the prime responsibility of managers to work for the betterment of their employees in a way that their work attitude, i.e., motivation to perform job and job involvement shall be ensured as it is found that work attitude of employee moderates while ensuring innovation and effectiveness within the organization through organizational learning processes.

Cellular companies are operating in a highly competitive environment, and it has become very hard for each company to gain a competitive advantage over others; therefore, survival lies with innovation. Innovation in their administrative structures, innovation in their working culture, innovation in their services, or processes to produce the products and innovation in their markets. The question lies in enhancing innovation and how innovation will be useful. This study has given empirical evidence for practitioners about innovation impacting effectiveness. Moreover, innovation can be enhanced in organizations by enhancing employees' learning processes. Therefore, managers must strive for innovation to achieve effectiveness in their organizations.

IMPLICATIONS FOR FUTURE RESEARCH

This study has explored the moderation influence of work attitude in the mediation effect of innovation between learning processes. This research study provides new ways for future research to investigate learning to enhance service quality and business model in their local context, especially in underdeveloped regions of the globe. It may be empirically tested how these factors may be related differently to each other and the organizational learning processes that leave a pending literature gap for future research.

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