

# Does Intrinsic Motivation Mediate the Impact of Employee Training on Employee Creativity? The moderation Model of Task Complexity

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#### Abstract

**Purpose-**This research aims to determine the impact of employee training. The research proposes the mediatingmoderating model on employee creativity. The mediator intrinsic motivation, mediates the relationship of employee training and employee creativity. The moderator task complexity moderates the relationship between intrinsic motivation and employee creativity. The focus of this study lies in implementing ways through which the employee creativity in a firm is increased.

**Methodology-** Convenience sampling uses to collect date through questionnaire from 250 individualemployees are currently working in the corporate sector of Pakistan. Data was analyzed through structural equation modeling, which included the sections of confirmatory factor analysis and path analysis.

**Result**-The three hypotheses were accepted and supported by significant findings of existing researchers.

These findings help concluding that employee training if nurtured in the corporate sector of Pakistan would significantly alleviate the employee creativity in the working environment. Fruitful advantages can then be achieved by increasing employee creativity which would indirectly benefit the firm itself.

#### Keywords: Employee Training, Intrinsic Motivation, Task Complexity, and Employee Creativity.

### I. INTRODUCTION

Numerous researches have debated regarding the importance of employee creativity and have come to the conclusion; for striving in the modern competitive world employee creativity is indeed significant (Gong Y, 2009). When an employee performs creatively their work speaks that of useful and novelty which is what an organization needs. The subsequent development of an idea, even the working techniques and the efficient implementation of any raw material for the product or service when performed with creativity is bound to enhance productivity for the organization (Amabile, 1988; Staw, 1990; Oldham, 1996). No matter where, it is evident that when an employee is creative in his/her work, their work gets productive and will always result in worthy, operative and valuable for the organization itself (Zhou, 2003). Regarding this as common knowledge, different organization to grow, adapt, and compete in modern settings.

Employee training can be defined as "an organized approach concerning the learning and development of an individual to improve their individual, team and organizational value" (Kraiger and Ford, 2007). After the

orientation, naturally the next step is training of the employees which are conducted as soon as orientation is ended. The process with which a abilities, knowledge, experience and talents can be leveled up and enhanced is simply training. It helps in indulging the employees in creative thinking processes and improved performances which eventually leads to the best performance of employee, hence shaping results for the organization. Training can never cease to exist; it is due to the continuous evolving nature of human beings as well as the market in work. Therefore it is never ending and a continuous process which is crucial for the well-being of an organization. Training is believed to beneficial for both employers and employees as well. Efficiency of an employee and productivity of an employee would definitely increase if he undergoes good training procedures. Other benefits gained from training include the improvement of employee's morale, less (Bartel, 1994). Moreover, the workforce being trained means the employees within that workforce will adapt fast and will develop new skills easily. Other benefits may include that of less cost of manpower or resources, minimization of mistakes, employees become more efficient and confident hence all in all the working environment gets better.

The definition of creativity has been changed drastically since the early debut of the word but the concept is more or less the same, just the context of use has been changed. Employee creativity can be defined as the generation of ideas with the potential of being novel and useful in solving problems, developing product or service and operational tasks or practices (Dul, 2011). The companies dependent on productivity have always relied upon employee creativity and therefore have wanted to seek a way to nurture creativity or to practice techniques that help maintain an employee's creativity. Traces have been observed with the contribution of previous researches and it can be concluded that for employees to indulge or remain creativity suitable environment should be maintained (Amabile, 1988; Ceylan, 2007; Neumann, 2010). Hence the importance of task complexity was observed and for this very reason included as the key variable in this research. Intrinsic motivation exhibits positive association with employee creativity (Hennessey, 1988). The study's literature review gave out striking reasoning and regarded employee motivation as ansignificant determinant of employee efficiency and achievement. The study of Dysvik, (2008) concluded that Employee training enhances intrinsic motivation which is indirectly essential for employee creativity. Researchers described motivation in the work setting as the inclination of an employee to put great levels of effort to reach managerial goals concerning his or her satisfaction needs (Dewett, 2007; Zhang, 2010; Eke, 2018). With these findings, the reasoning behind choosing intrinsic motivation as the mediator between employee training and employee creativity has been justified.

Tasks are integral for organizations and the performance of an employee is also judged per the diverse range of tasks performed by the employee with efficiency (Wood et al., 1987). Task complexity varies to that of task characteristics and is important accordingly. Task complexity has been defined as a task that demands mental and technical problem-solving knowledge to accomplish the task at hand (Chang, 2014). The task complexity can be narrowed or broadened by the decision of the higher-ups or the managers; the main idea is that task complexity conceptualizes the main focus of an employee to exhibit their exceptional skills and creativity. For employees to complete the assigned complex tasks they require a suitable environment and intrinsic motivation (Campbell, 1988). Hence the reasoning behind the usage of Task complexity as a moderator between intrinsic motivation and employee creativity has been justified.

Continuous evolvement has left managers baffled and they now seek employee creativity to get the competitive edge they now need. This study suggests the exploration of employee training on employee creativity for the sake of the survival of an organization in the modern highly competitive market. This study also expects to discuss the mediating role of task complexity and the moderating role of intrinsic motivation in attaining employee creativity.

Our rest of the study organization is as follows. In subsequent next part describe the literature review. Then in this study research methodology part describes. In fourth part of study discusses analysis and results. In the end conclusion, research limitation, practical implication and future direction of study describe.

## II. THEORETICAL FRAMEWORK

The theoretical framework incorporates all the key constructs of the proposed research. The dependent variable of this study is Employee creativity whereas the independent variable of this study is Employee training. This study also subjugates the mediation moderation model by including intrinsic motivation and task complexity. Moderation is a method according to which it is checked whether that third variable influences the strength or direction of the connection between an independent and variable. An easy way to remember this is often that the moderator variable might change the strength of a relationship from strong to moderate (McClelland, 1993). Comparatively, Mediation is straightforward. A mediator's nature is to mediate the relationship between the independent and dependent variables and to explain the motive for such a relationship and its existence (Baron, 1986). The mediation-moderator model is exhibited by intrinsic motivation and task complexity respectively.

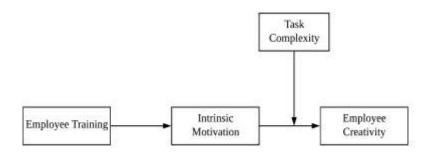


Fig 1: Theoretical Framework

# III. LITERATURE REVIEW

# **Employee Creativity**

Employee creativity can be defined as "the generation of ideas with the potential of being novel and useful in solving problems, developing product/service and operational tasks or practices" (Dul, 2011). The knowledge observed from the findings of (Dul, 2011) brings forth the concepts of novelty and usefulness.. Oldham & Cummings, (1996) supported this by their research findings, which stated that employee creativity is necessary to gain competitive advantage hence increasing survival chances in the market. Gilson, (2008) also shared how employee creativity adds values to organizations by improving employee's performance. The study of Y Gong, JC Huang, and JL Farh, (2009) portrayed how creativity alleviates employee's performance indirectly helping the organization gain fruitful performance, transformational leadership forming creativity and resulting in the employees ' being more efficient.

# **Employee Training**

Employee training can be defined as "an organized approach concerning the learning and development of an individual to improve their individual, team and organizational value" (Kraiger and Ford, 2007). Training increases and updates the knowledge of employees which results in an increase in performance that has been established prior. Employee training is considered an asset because if employees are capable then only businesses' performance will rise more and can provide upcomingaids as compared to their competitor (Ameeq-ul-Ameeq&Hanif, 2013). Training has been catered as a continuous development of an employee's attitude, knowledge, and skills in different researches (Armstrong, 2001).. Thus, the main goal of scheming training platformsis to ensure the supply of a talented workforce that would play a key role in an organization is pointless (Kulkarni, 2013). Naong (2014) explored the linkages among preparing and representative inspiration and presumed that workers who take part in different preparing programs will in general be

more spurred than the individuals who don't effectively include in them. Thus we propose the following hypothesis of Employee training:

# H1: Employee training features a positive effect on employee creativity

Tsai et al. (2007), specified that employees showing promise towards training and learning processes and depict the enhanced level of satisfaction with their job show that training positively affects their performance. Meyer and Allen,/ (1991) established that practices like training directly or indirectly affects the motivation of staffs and their promise to the organizations. Training increases and updates the knowledge of employees which results in an increase in performance that has been established prior. Employee training is considered an asset because if employees are capable then only businesses' performance will rise more and can provide upcoming aids as compared to their competitor (Ameeq-ul-Ameeq&Hanif, 2013).

Based on the finding contributes concerning employee training and its relationship with intrinsic motivation the first theory for this study can be stated as follows:-

# H2: Employee training features a positive effect on intrinsic motivation.

# **Intrinsic Motivation**

Intrinsic motivation can be defined as "the motivation of an employee to accomplish a task for him/ her, to experience fulfillment and pleasure inherent in the task" (Deci et al., 1989). This type of motivation is self-initiative, and not forced. When employees understand their work's value and social relevance, they become proud of themselves (Tymon et al. 2010), feel more self-accomplished, and become intrinsically motivated (Thomas 2000).

Responsibility and meaningfulness are one of the key outcomes gained from effective training and it plays its role in filling the employees with enthusiasm and curiosity to explore unexplored territories, and transform their new creative ideas of innovative products/services and capture the customer into it to enhance his interest (Grant and Berry, 2011). Amabile (1993), intrinsic motivation often arises from the individual's positive reaction to the task itself, like interest, involvement, curiosity, satisfaction, or positive challenge. So the more it is justified that it was used to act its part as a mediator. Güllü (2016), concluded that penalties of training seemto appear through an amplified level of performance and inspiration amongst employees that is vital to efficiently achieve structural goals.

# H2: Employees' intrinsic motivation mediates the positive relationship between employee training and employee creativity

# **Task Complexity**

Task Complexity can be defined as "objectives of a task achievable by performing complicated actions which require strategic development and manipulation of an employee's effort, persistence, and attention" (Wood, 1987). The definition explains task complexity and mentions three ways that an employee overcomes the complex tasks. These include employee's effort, persistence, and attention. Employee's effort helps in solving problems and complex task with his/her capability and intuition. Employee's persistence is the degree to which an employee depicts his constant, determined behavior in solving complex problems. This is important for the organization as they need dynamic individual solving problems according to the time which is suitably resourced for it. For instance, if the employee gets to engrossed in the work at hand although the deadline is short and not much effort is required, this would indicate his lack of management skills. Lastly, employee's attention negates the fact of the degree to which the employee is attentive towards his surroundings. Being able to interpret a task the first time is what is required by employers nowadays. Hence task complexity helps firms as well as employees to work efficiently and effectively. This is the reason why this study makes use of task complexity to act as a moderator between intrinsic motivation and employee creativity.

In an administrative set-up, employees' task may be a major problem to think about and with this problematic issue, another worrisome thing associated is their creative performance. A task may range from it being flexible, easy and complex. Few researchers have debated over the fact that task difficulties are often in mind as to when comparing that this is easy and that is difficult whereas some researchers contradict that

it is their perception due to their lack of their skillset. Task difficulties and ease are individuals' perception of their task. The Skillset and perceptions of one employee may vary from another employee which is why the task categories are defined. Valcour, (2007) defined task complexity as the tasks which demand stimulation and challenge to accomplish the task assigned to them.

# H3: Task Complexity moderates the positive relationship between intrinsic motivation and employee creativity.

# IV. RESEARCH METHODOLOGY

## Sample design and Collection of Data

This research is survey-based. Whereas the methods used for this research are quantitative. The quantitative analysis helps in exploring the relationship between the research variables and their relationship (Hine and Carson, 2007). For ideal and promising results sample size was set to 250 samples. The criterion proposed by McNabb (2013,) made it a compulsion to have at least 200 samples which is why the sample size was selected to be of 250 samples. Snowball sampling was used to ensure the response rate and to detect the ideal set of the individual to fill out the questionnaire. The domain of business associates irrespective of the genre was decided, the questionnaire was then rotated amongst the employee virtually with the help of Gmail or social media apps and hence forwarding opted. Following is the demographic ratio of the respondents.

### **Demographics**

Characteristics	N	Percentage	
Gender			
Male	76	30%	
Female	174	70%	
Age Group			
18-25	160	64%	
26-33	72	28%	
34-45	18	7%	
46 & above	0	0%	
Marital Status			
Single	80	32.8%	
Married	164	67.2%	
Divorced	0		

### Measurers

The instruments were adopted from different studies to collect the data from respondents. The instruments were measured on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The independent variable employee training was adopted from the study of (Chiaburu and Tekleab, 2005) with a total of four items. The dependent variable employee creativity was developed from the study of (Ikechukwu et al., 2019) with a total of four items. The mediating variable intrinsic motivation was adopted from the study of Frey (1997) with a total of five items. Lastly, the moderating variable task complexity was adopted from the study of Dean and Snell (1991) with a total of three items.

# V. ANALYSIS AND RESULTS

The use of Structural Equation Modeling (SEM) opted to generate the results. SEM further involves the Confirmatory Factor Analysis (CFA) and Path Analysis (PA). Moreover, the software used was SPSS. CFA played the important role and tested the instruments of the variables for validity and reliability. In simple word CFA contributed the results by concluding which is valid and reliable. After the completion of CFA, PA was conducted. PA fulfilled its role in testing the hypothesis of this study. In simple terms PA helped in rejecting and accepting the hypotheses.

# **Reliability Analysis**

To test the reliability of individual variable we have calculated the Cronbach;s alpha value of each construct. The range of Cronbach;s alpha value is .709 to .936 that show reliable.

Sr. No.	Variables	No. of Items	Cronbach Alpha
1	Employee Creativity	4	.923
2	Intrinsic Motivation	5	0884
3	Employee Training	4	.936
4	Task Complexity	3	.709

Table	1Cronbach	alpha	co-efficient
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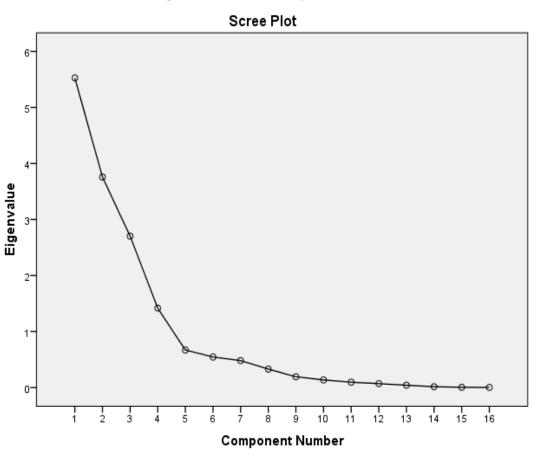
This means that the variable is reliable and the items are relatable and that if used in similar settings then it will produce similar results (Gliem and Gliem, 2003).

# Table 2 KMO and Bartlett's Test

- Kaiser-Meyer-Olkin Measure (	.725	
Bartlett's Test of Sphericity	Approx. Chi-Square	6253.924
	df	120
	Sig.	.000

The above-mentioned table 2 shows the KMO coefficient which is 0.725 and is higher than 0.5, this shows that the considered instruments are valid and will provide reliable results (Peri, 2012). he test of sphericity and

the chi-square adds to the validity of the constructs.



The above scree plot also emphasizes that amongst the 16 items of this study, 4 components explain 83% of the variation in the model which is why the 4 items have an eigenvalue of great than 1.

# Regression

Table 3 Model Summary

Model	R	R Square	- )	Std. Error of the Estimate
1	.604ª	.605	.654	.72745

a. Predictors: (Constant), Avg\_TC, Avg\_IM, Avg\_ET, Moderator

Regression was done to inquire about the direct effect of employee training and intrinsic motivation and intrinsic motivation on employee creativity. Also, this study enquires the impact of the moderating effect of task complexity between intrinsic motivation and employee creativity. In table 3 model summary shows that the adjusted r square is 0.654. This means that the considered model has 65.4% of the variation in the dependent variable.

Table 4 ANOVA <sup>a</sup>							
Sum of Squares	df	Mean Square	F	Sig.			
129.650	4	18.616	35.179	.000 <sup>b</sup>			
74.464	245	.529					
204.114	249						
	129.650 74.464	129.650 4 74.464 245	129.650 4 18.616   74.464 245 .529	129.650 4 18.616 35.179   74.464 245 .529			

a. Dependent Variable: Avg\_EC

b. Predictors: (Constant), Avg\_IM, Avg\_ET, Moderator

ANOVA table 4 analysis shows that sum of squares in the regression model is 129.650 which is higher than the residual sum of squares. This shows that the model is considered is valid and the best fit model (Girden, 1992).

Coefficients								
Model			Standardized Coefficients	t	Sig.			
	В	Std. Error	Beta					
(Constant)	2.724	.315		8.660	.000			
Avg_ET	.150	.066	046	761	.047			

a. Dependent Variable: Avg\_EC

Hypothesis 1 stated that employee training has a significant on intrinsic motivation because of the significance p-value of 0.000 which is less than 0.05. The results show that the hypothesis was accepted. The constant shows that even if employee training is zero the intrinsic motivation will increase by 2.724 units. The results indicate that one unit increase in employee training will increase intrinsic motivation by 0.150 units.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	В	Std. Error	Beta			
(Constant)	3.124	.215		10.460	.000	
1Avg_IM	.275	.059	4.670	.561	.047	
Moderator	.176	.049	220	-3.596	.000	

a. Dependent Variable: Avg\_EC

The second testing shows that even if the moderator and intrinsic motivation have no impact on employee creativity, the constant impact of 3.124 units will hold. Hypothesis 2 stated that intrinsic motivation has a significant impact on employee creativity. The hypothesis was accepted because of the significance p-value of 0.047 which is less than 0.05. The results show that one unit increase in intrinsic motivation will increase employee creativity by 0.275 units. Hypothesis 3 stated that task creativity moderates the relationship between intrinsic motivation and employee creativity. The hypothesis was accepted with a p-value of 0.000 which is less than 0.05 and hence is established that task complexity does play a role in predicting employee creativity through intrinsic motivation.

In order to gauge the mediation impact of intrinsic motivation on employee training and employee creativity, first a direct testing of employee training on employee creativity was done. In order to move forward, this directs relationship to be significant and accepted. But the relationship came out to be insignificant and the hypothesis 4 was rejected. This means that employee training cannot be a predictor of employee creativity which then helps in rejecting the hypothesis 5 that the intrinsic motivation mediates the relationship of employee training and employee creativity. The insignificant results were as follows:

ANOVAª								
Model		Sum of Squares	Df	Mean Square	F	Sig.		
	Regression	20.821	1	20.821	28.171	.000 <sup>b</sup>		
1	Residual	183.293	248	.739				
	Total	204.114	249					

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a. Dependent Variable: Avg\_EC

b. Predictors: (Constant), Avg\_ET

			Coefficier	nts			
Model	Unstandardi	zed Coefficients	Standardized Coefficients	t	Sig.	95.0% Confi	idence Interval for B
	В	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	2.391	.241		9.919	.000	1.917	2.866
Avg_ET	.310	.058	.319	5.308	.000	.195	.424

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a. Dependent Variable: Avg\_EC

#### VI. **DISCUSSION AND CONCLUSION**

The purpose of this research was to study the direct impact of employee training on intrinsic motivation with intrinsic motivation's mediating impact on employee training and employee creativity as well as the moderating impact of task complexity on intrinsic motivation and employee creativity. This study focuses on employee creativity as the dependent variable under study followed by employee training as the independent variable, intrinsic motivation as the mediating variable and task complexity as the moderating variable. Hence the mediating-moderating model of this research presented three hypotheses that were thoroughly studied.

Hypothesis one assumed that employee training has a positive impact on intrinsic motivation. These findings were supported by (Naong, 2014; Güllü 2016) as they concluded in their respective studies of positive grounds for both, employee training and intrinsic motivation. The results of the findings concluded that employee training can be a predictor for intrinsic motivation. This establishes that if management focuses on solidifying employee training then they can increase the intrinsic motivation amongst the employees. Intrinsic motivation, if nurtured in a firm, improves an employee's commitment and competency (Mark land, 1999). The benefits of intrinsic motivation also include alleviated employee performance, self-efficacy and employees tend to become useful assets for the companies (Lin, 2007). In the Pakistan market, if employees are entrusted with responsibility with off the job or on the job, they tend to have a high level of intrinsic motivation that lessens their intent for turnover.

Hypothesis two assumed that intrinsic motivation positively mediates the relationship between employee training and employee creativity. These findings were supported by (Coelho et al., 2011) as they concluded that difficult times require employee training which often motivates the employee to perform creatively. The result of the findings concluded that intrinsic motivation indeed mediates the relationship between employee training and employee creativity. This means that intrinsic motivation can influence the relationship between employee training and employee creativity. Therefore if management tends to grasp situations with the possibility or the involvement of employee training and employee creativity, then establishing intrinsic motivation could help to improve their relationship positively. Hirst et al., (2009) stated that employee creativity produces fruitful results for a firm including the improvement of overall firm performance which results in gaining new product/service development and competitive advantage. In the Pakistan market, the norms set for nurturing intrinsic motivation may improve the relationship between employee training and employee creativity which may result in firms gaining competitive advantage and highly competent employees.

Hypothesis three assumed that task complexity positively moderates the relationship between intrinsic motivation and employee creativity. These findings were supported by Scott and Bruce (1994), as they already concluded in their research that task complexity moderates the relationship between intrinsic motivation and employee creativity. The results of the findings also concluded that task complexity positively moderates the relationship between intrinsic motivation and employee creativity. The moderator task complexity helps in improving the relationship between intrinsic motivation and employee creativity. Employee creativity and intrinsic motivation have a positive relationship as (Dewett, 2007) established in his research. Thus if firms tend to focus on increasing the task complexity to find more and new creative challenges for employee, it can motivate them intrinsically to alleviate their performance to produce creative

results. In Pakistan market, increasing task complexity could help employees find the thrill and intrinsic motivation in their work to fulfill and complete new creative tasks hence staying motivated, highly creative and reduced turnover intent.

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