

INNOVATIONS

Investigating creative behaviour of employees in IT sector

¹S. Venkata Narayanan , ²Dr. S. Jahira Parveen , ³Dr. Radha Ganesh kumar,

1. Research Scholar (Phd), College of Management, SRM Institute of Science and Technology (formerly SRM University), Kattankulathur, Tamilnadu, India

2. Assistant Professor, College of Management, SRM Institute of Science and Technology (formerly SRM University), Kattankulathur, Tamilnadu, India

3. Assistant Professor and Head, Department of Management Studies, SRM Valliammai Engineering College, Kattankulathur, Tamilnadu, India

Corresponding Author: **S.Venkatanarayanan**

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ABSTRACT

From a social perspective, the information technology sector looks like software development using series of code, seemingly uncreative in the machine language to get the desired output. In reality, the IT discipline requires creative intelligence to process the data and innovative ways to find solutions to a problem or developing a product.

Creativity in IT is the driving force for the development of both local and global perspectives. Creativity aids in finding new development, innovation between each iteration, and every development phase of software solutions or product. India is one of the biggest markets all over the globe in software development. A few businesses all over the world outsource their ventures to India. Imaginative conduct has been seen as the inventive act, or a set of acts, which is made unequivocal through conduct. Inventive conduct isn't tame; it is activity, which leads to imaginative yield or a arrangement to a challenge. This research entitled, 'Assessment of creative behaviour of employees in IT sector' – A study with specific reference to the IT sector companies involved in software development, packaging and other sub-processes under development arena. It will attempt to identify the employees' creative behaviour working in software development and their contribution to creativity in their work. Inventiveness is found to be a noteworthy calculate for organizational victory independent of any field or industry. This investigate will give an outline of inventiveness in computer program companies. In this study, descriptive research is used and a structured Non-disguised questionnaire is followed.

1. Introduction to the study

Imagination is found to be a critical calculate for organizational victory independent of any field or industry. This think about will offer assistance in understanding the significance of inventiveness and behavioural characteristics for person workers in different bunches within the IT division (Computer program organization). The IT industry's affect on Asian country is significant. It's a positive donor to India's income development, ability capability, work force differing qualities, and advanced infrastructure.

India's program industry is separated into four primary portions - IT administrations, Trade Prepare Administration, Program Items and Building Administrations, and Equipment. Indian Data innovation division has seen development within the past three decades and has turned into one of the noteworthy supporters. Subsequently, it is critical that inventiveness at the work environment will be a basic calculate in a program organization's development. This inquire about points to think about the inventive conduct of workers in IT computer program organizations.

2. Literature Review

2.1. The concept of creativity

Creative ability in affiliations is getting to be more basic since it is significant to the by and expansive advancement, execution and competitive advantage (Anderson et al. 2014; Zhou 2003). Given the importance of creative energy, it is no stun that innovativeness to boot an zone of continued ask around (Hirst et al. 2009). Innovativeness may possibly be a enthusiastic concept that applies to a broad cluster of human works out. In show disdain toward of the reality that there are changes in how individuals acknowledge creativity, investigators agree that creative judgments are depended on the combination of two key properties: Innovativeness is an collection of imagination (inventiveness, peculiarity) and esteem (significant, expressive) as characterized interior a particular setting (e.g., Plucker, Beghetto, & Dow, 2004; Runco& Jaeger, 2012. Imagination has two measurements. The primary measurement is the notion of novelty; it could be a marvel in existence . Hence, anybody can be inventive and contribute to the trade environment, so everybody needs to be included in imaginative forms. The moment measurement is the idea of value, which alludes to fabric or commonsense strategies for evaluating convenience of novel thoughts. (Shalley et al., 2004). Inventiveness offers a interesting advantage for accomplishing and keeping up a competitive advantage in a exceedingly competitive circumstance (Anderson, De Dreu, & Nijstad, 2004

2.2. Individual Creativity

Imagination is seen as the most noteworthy level of human information, the most elevated control of considering, and the ultimate creation of human's intellect and thought. (Soleimani, 2005, p. 16). Perhaps more than any other human quality, creativity is vital to the shaping of the future of man. It seems obvious that society must provide a climate that enables individual creative potential to emerge and develop. Creative individuals are essential to our society and, to a certain extent, creative potential appears to exist in every individual. However, the mere recognition of these facts is not in itself sufficient. There is an urgent need to nurture human creative potential through the study, analysis and implementation of research findings. (Review of Research on Creativity by Marshall Hann, ED 029 090, University of Minnesota, Minneapolis, Minnesota)

Inventiveness, be that as it may, is an capacity that makes a difference individuals distinguish conceivable arrangements. On the off chance that somebody is able to expand the result of the decision-making prepare, he/she will be called a levelheaded individual (Robbins, 2010, pp. 120-123).

Person Inventive conduct has been characterized by George and Zhou (2001) as the era of valuable and novel thoughts by individuals working at an organization, in this manner actuating advancement.

2.3. Employees' Creative behaviour

Specialist inventive considering is one among the preeminent basic organization guidelines that has pulled within the eye of commerce organization examiners as one of the key supporters to various leveled triumph (George & Zhou, 2001; Tierney, Farmer, & Graen 1999; McLaughlin & Harris, 1997; Jong & Hartog, 2007; Hellman & Thiele, 2009; Tushman & Orielly, 1997; Martins & Terblunche, 2003. Concurring to analysts like (Hellman and Thiele, 2009; Telsuk, Farr, & Klein (1997);, not because it were can agents make present day contemplations, they'll too find courses of action to current issues and bridge cleft, So they are likely to lead definitive progressions.

Workers can be inventive in case there's a inventive environment and a imaginative pioneer, as representatives learn from their environment and organization culture. In agreement with George and Zhou (2001, pp. 513) "Imaginative conduct is the generation of novel and valuable thoughts by workers which can be the beginning focuses of development." It is the inventive conduct of the representative that's reflected within the broader hierarchical imagination. Representatives of the organization, from senior administration to front line staff, contribute to the organization's inventiveness at a few level (Zhou & Ren, 2012).

3. Objective of the study

- i. To assess the creativity based on age and experience of individual employees in IT.
- ii. To assess the creativity based on their age and designation to understand the behaviour of employees in IT.
- iii. To identify the significant relationship between the designation and creativity of the individual employees in IT.
- iv. To analyse the level of innovation exhibited by individual employees based on their age, experience and creativity in their work place.

4. Research Methodology

4.1 Type of Research

The Graphic investigate strategy is received to look at the imaginative conduct of representatives in a specific statistic study. An basic characteristic of clear inquire about is that whereas expressive inquire about can utilize numerous factors, as it were one variable is required to conduct a clear ponder.

A organized non-disguised survey comprises of a formal list of questions inquired to the gathering of people to gather the related truths. The questioner inquires the questions entirely concurring to the endorsed arrange. Here the objective behind the survey is uncovered to the respondents. Organized non-disguised questionnaire—it is made up of a formal list of questions that are inquired to the gathering of people in arrange to assemble significant data.

The question aire inquires the questions entirely concurring to the set arrange. Here the objective behind the survey is uncovered to the respondents.

The test comprised of 66 members (40 guys, 26 females) from different IT computer program organization were managed with a survey created by Zhou and George (2001) for measuring the imagination within the 13 thing scale. Reactions were made on a 5-point scale that extended from 1, “strongly disagree” to 5, “strongly agree.” For case “I regularly come up with imaginative arrangements to issues at work”. The scale was profoundly solid (Cronbach's alpha was.74). The overview was conducted by online mode collecting reaction from the members.

4.2. Type of sampling: Non-Probability Convenience Sampling is used.

4.3. Sample size: 66

4.4. Tools used: SPSS software is used and Chisquare, Anova percentage analysis calculated.

5. Analysis & Interpretation

The study contained a mix of ages and designation with the largest selection of respondents possible. Responses were obtained from 66 individuals. Assessment of creativity at workplace is measured by the collaborations of answers (measured according to a Range of 5 points) with 13 questions. Responders were inquired to indicate their level of understanding to a articulation ordinarily in five focuses: (1) Unequivocally oppose this idea; (2) Oppose this idea; (3) Not one or the other concur nor oppose this idea; (4) Concur; (5) Emphatically concur. (Likert Scale form)

5.1. Analysis of results:

SPSS software is used to perform correlation analysis and to test reliability, Convergent and unequal construct validity. The creative variables were calculated using the Chi-square and Anova. Matched Test T-Test is utilized to decide whether the cruel contrast between two sets of Age and Involvement is zero. In a combined test t-test, each subject or substance is measured twice, coming about in sets of perceptions.

Table 1: Creativity based on age and experience of individual IT employees (Paired Samples T-Test)

Paired Samples T-Test (i. Objective)									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Age – Experience	.985	5.515	.679	-.371	2.341	1.451	65	.152

The above table shows that the significant level is greater than .005. Hence the null hypothesis is accepted and the alternative hypothesis is rejected at 95% confidence level. Therefore, there is no mean difference between Age and Experience.

Chi square method used to determine the association between Age and Designation.

Null hypothesis: There is no significant association between Age and Designation.

Alternative hypotheses: There is significant association between the Age and Designation.

Table 2: Creativity based on age and designation of IT employees cross tabulation

Age * Designation Crosstabulation (ii. Objective)							
Count							
		Designation					Total
		Project Lead	Project Manager	Software Engineer	Software Trainee	Team Lead	
Age	21-27	1	1	25	2	2	31
	28-35	1	2	10	0	2	15
	more than 35	1	9	4	0	1	15
Total		4	12	42	2	6	66

Table 3: Creativity based on age and designation of IT employees (Chi-Square Test)

Chi-Square Test			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	47.183 ^a	20	.001
Likelihood Ratio	34.632	20	.022
N of Valid Cases	66		
a. 26 cells (86.7%) have expected count less than 5. The minimum expected count is .03			

The above chi square table shows that the significant level is lesser than .005. Hence the null hypothesis is rejected and the alternative hypothesis is accepted at 95% confidence level. Therefore, there is significant association between the Age and Designation.

Used ANOVA to determine whether different aspects of approaches produce different effects on creativity. H0: All Age group of employees attempt towards creativity in workplace. H1: All Age group of employees do not attempt towards creativity in workplace.

Table 4: ANOVA test to determine the different effects on creativity

ANOVA					
Age					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	23.907	3	7.969	.265	.850
Within Groups	1864.351	62	30.070		
Total	1888.258	65			

H0 is accepted since p value is less than significance level. Hence all Age group of employees attempts towards creativity in workplace.

Chi square method again used to determine the association between Designation of the employees and Level of Exhibiting Creativity in Workplace.

Null hypothesis: There is no significant association between Designation of the employees and Level of Exhibiting Creativity.

Alternative hypotheses: There is significant association between the Designation of the employees and Level of Exhibiting Creativity.

Table 5: Association between designation and exhibiting creativity at work cross tabulation

Designation * Exhibit Creativity Cross tabulation (iii. Objective)						
Count						
		exhibitcreativityonthjob				Total
		strongly agree	agree	neutral	strongly disagree	
Designation	Project Lead	2	2	0	0	4
	Project Manager	5	5	2	0	12
	Software Engineer	8	17	16	1	42
	Software Trainee	0	1	1	0	2
	Team Lead	3	3	0	0	6
Total		18	28	19	1	66

Table 6: Exhibiting creativity at work and designation of IT employees (Chi-Square Test)

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.233 ^a	12	.595
Likelihood Ratio	13.536	12	.331
N of Valid Cases	66		
a. 16 cells (80.0%) have expected count less than 5. The minimum expected count is .03.			

The above chi square table shows that the significant level is greater than .005. Hence the null hypothesis is accepted and the alternative hypothesis is rejected at 95% confidence level. Therefore, there is no significant association between Designation of the employees and Level of Exhibiting Creativity in workplace.

Table 7: Creativity based on age and experience towards exhibiting creativity at work (Chi-Square Test)

ANOVA ^{a,b} (iv. Objective)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.631	1	1.631	.071	.793 ^c
	Residual	460.232	20	23.012		
	Total	461.864	21			
a. Dependent Variable: Age						
b. Selecting only cases for which Experience = 1						
c. Predictors: (Constant), Iexhibitcreativityonthjob						

Regression used to test the significant association between the Age and Experience towards exhibiting creativity in workplace.

Table 8: Association between age and experience in exhibiting creativity at work - Regression Coefficient

Coefficients ^{a,b}						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.017	3.136		1.281	.215
	Iexhi bit creativity on th job	-.386	1.449	-.059	-.266	.793
a. Dependent Variable: Age						
b. Selecting only cases for which Experience = 1						

The above table shows that the significant level is greater than .005. Hence the null hypothesis is accepted and the alternative hypothesis is rejected at 95% confidence level. Therefore, there is significant association between the Age and Experience towards exhibiting creativity in workplace.

6. Suggestion

This study tested four correlation hypotheses in IT between creativity and behavioural features. The test results revealed a positive association between age, experience and creativity exhibited at workplace. The various behavioural traits and the correlations showed vary for the personalities of people. Whether you would by nature come up with an innovative idea, a clean, imaginative solution in the workplace could not have nothing to do with the age or designation. IT sectors should take few measures that promote actions, promotes creativity. Excessive pressure has been noted to affect creativity (Amabile, Conti, Coon, Lazenby, & Herron, 1996). This research however has its limitations. The results of the research are unique to creativity implemented by IT employees. In addition, the outcomes of the analysis were evaluated through questionnaire survey data reported by all the authors. Therefore, exploring a causal

relationship is difficult. Despite these problems, the findings of the study show that changing policies that encourage the organisational change may affect creativity.

7. Conclusion

Workplace innovation research has evolved in recent decades and increasingly reflects in its own right, a science area. Adopt an organisational emphasis on creativity growing awareness of qualitative factors was involved. The incremental development of the past highlights of a dispositional or sound calculate to more transitory motivational, full of feeling, or cognitive states freely or in combination with their relevant history, to the conclusion. This creation is demonstrated by the interactive influence of various actors and contextual influences. This corpse additional management implications are provided by analysis data. It implies, for example, that Selection is unlikely to produce the optimal results to encourage innovation. The study of work on innovative actors, even though organisations are doesn't implement any specific system, indicates selected and recruited workers who are instinctively motivated to be innovative.

In the other side, our analysis of work on helping non-creative performers shows that while administrators are involved build a creative atmosphere, including workers without a natural tendency. Creative people may be creative. Another sign of usually our ponder of administration a basic position in advancement offer assistance setting. Organizations ought to at that point prepare their directors illustrate the sort of management or supervisory conduct that energizes instead of hinders inventiveness of the representative. A advanced sort characterizing the relationship between quality, source and openings impacts advancement in IT. Eventually, these discoveries are portion of an progressed mindfulness of what drives creative ability at work, which may shape the premise of practitioners' noteworthy direction, may inevitably require more orderly understanding of the numerous connections between imagination performing artists and settings.

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