

A Study on the Opinion of the Employees towards the Effectiveness of Training Program Using Factor Analysis in Select It Industries, Coimbatore

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Abstract— Investing in people today through training has become very valuable for an organization's success in their industry. Today employee training has become critical to create a culture in which employees feel valued and entrusted with the organization's success. The objective of the paper was to analyze the various factors which contribute to effective training in the organization. A questionnaire was developed which contains questions on the training conducted and how the training received by employees contributed to their performance in job. This questionnaire was administered to 1100 employees. A factor analysis was conducted to understand the major factors which contributed to the effectiveness of training.

Index Terms— Employee training, Factor analysis, Effectiveness

I. INTRODUCTION

Today, the corporate world has become increasingly knowledge based that investing in intangible assets of an organization has become a strategic source for competitive advantage. Increasing competition, globalization and environmental changes have made learning an ongoing process in the corporate world. It has become a success factor more important than ever in any organization. Research suggests that workplace learning not only contributes to improvement of employee's skills and abilities but also enhances their satisfaction with the job and to organizational commitment. Researchers have also found out that overall job satisfaction contributes to higher organizational commitment. Further organizational commitment has been identified as a predictor for employee workplace performance and organizational success. Despite the considerable amount of money and resources organizations spent on training and development, it has yet to be determined to examine to what extent these investments have been successful for the employees and the organizations. It was found that only a fraction of the skills and abilities learned from a training program has been transferred to the job. Most research on training effectiveness consists of gathering data regarding trainee reactions towards the training program and how much learning has taken place. Further research has often asserted the fact that research on training effectiveness has been very a theoretical and non-empirical. Thus from a theoretical stand point a more comprehensive conceptual framework can be developed by including factors outside the training context.

The lack of research in the training effectiveness area can be attributed to the fact that many organizational variables that can influence employee performance have yet to be identified and measured. Furthermore, the lack of research on training effectiveness can be attributed to the difficulty in measuring such result outcomes as productivity and quality which aside from the immediate training environment are also influenced by the broader organizational environment.

II. NEED OF THE STUDY

The man power must be properly recruited, nourished and utilized. Every organization must have its own human resource policies, procedures, rules, regulations, strategies and so on. For this purpose the organization must have separate department called HRD/ T&D, which will all the times strive to manage and develop the human resource in organization. To assess the employee and employer relationship, organizations have to continually conduct the surveys on the employee reactions to the managerial practices. Though there are some studies in this field, there are some gaps in them. The information provided by them is not suitable and sufficient for present context. So this study is to be conducted to fill the gap.

III. STATEMENT OF THE PROBLEM

The success of orientation or any other type of training for IT employees can be gauged by the amount of learning that occurs and is transferred to the job. Too often, unplanned, uncoordinated, and haphazard training efforts significantly reduce the learning that could have occurred. Training and learning will take place, especially through informal work groups, whether an organization has a coordinated effort or not-because employees learn from other employees. But without a well-designed, systematic approach to training, what is learned may not be what is best for the organization. Training is useful in a business environment. When this method of training used, participants asked to sort through data provided in the case to identify the principal issues and then propose solutions to these issues. The learning objective of the trainees must know the concepts and principles and discover new ones. Hence, the study is undertaken.

IV. REVIEW OF LITERATURE

Paquet et al., (1987) found that data collection needed to be built into the training program for optimal data gathering. If managers could use the evaluation data for their own benefit as part of their training, they would be more likely to cooperate. Holli and Calabrese (1998) defined evaluation as comparisons of an observed value or quality to a standard or

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criteria of comparison. Evaluation is the process of forming value judgments about the quality of programs, products, and goals. Vianen et al. (2011) examined individual and situational factors that impact the relationship between age and employee training and development willingness. The article proposed that the relationship between age and training and development willingness would be moderated by employees' entity self-theory and perceived developmental support. Furthermore, the authors investigated supervisors' beliefs about the avoidance orientations of older employees and whether these beliefs would moderate the relationship between employee age and training and development willingness. The proposed moderation effects were found. Moreover, it was shown that entity self-theory beliefs, perceived developmental support, and supervisor avoidance orientation beliefs were related to the training and development willingness of older subordinates.

V. OBJECTIVE OF THE STUDY

The main objective is to study on the opinion of the employees towards the effectiveness of training program using factor analysis in select IT industries, Coimbatore.

VI. RESEARCH METHODOLOGY

The validity of any research depends on the systematic method of collecting the data, and analyzing the same in a sequential order. In the present study, extensive uses of both

primary and secondary data were made. For collecting the primary data, construction of questionnaire was employed in the study. First-hand information was collected from 1100 respondents of select IT industries, Coimbatore. Stratified random sampling method was employed for selecting the respondents from the selected District. Factor analysis was employed for further analysis. Factor Analysis is a method used to transform a set of variables into a small number of linear composites, which have a maximum correlation with original variables. Factor analysis is used to study a complex product (or) service in order to identify the major characteristics or factors considered important by the respondents. The purpose of factor analysis is to determine whether the responses of several statements favored by the respondents are significantly correlated. If the responses to the several statements are significantly correlated, it is considered that the statement measures some factors common to all of them.

VII. DATA ANALYSIS AND INTERPRETATION

The opinion of the employees towards training programmes was studied by measuring the concepts through 20 statements of cognitive components, affective component and co native components of the respondents. These 20 statements were chosen and classified in an orderly form, and factor analysis was employed and the detailed analysis and discussions are done at various stages.

Table 1 Training program measures

Va. No.	Statements
1	Attending training is very enjoyable
2	Teaches new methods and techniques to improve the performance
3	Encourage me to work as committed in producing high quality work
4	Enable me to be adoptable and competent to the skill required
5	Enable me to learn how to do my job better
6	Enable me to learn things that are relevant to my needs
7	Teaches me to work safer
8	Use certain skills but lost many as I was not using them
9	Emerging New technologies are psychological turbulence throughout your career
10	Training helps people to acquire knowledge and awareness in the subject
11	Training given helps me to do my job effectively and efficiently
12	Actual training given and the real working environment are entirely different
13	Training given increases my self-confidence and helps me to handle stress in the working condition
14	I am satisfied with the present methods and quality of training
15	Training helps me to maintain good relationship with my superior, colleagues and subordinates
16	Training normalizes the rate of transfer and turnover retention
17	Bottlenecks and deadlines can be met through training
18	I think that a good training program changes your attitude and produces amazing results in your career
19	Timing of training session is convenient
20	I am attending the training program regularly

Table 2 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	Bartlett's Test of Sphericity		
	Approx. Chi-Square	Df	Sig
0.764	5491.093	190	0

The above table shows the results of Bartlett's test of sphericity and Kaiser Meyer Olkin measures of sample adequacy were used to test the appropriateness of the factor model. Bartlett's test was used to test the null hypothesis that the variables of this study are not correlated. Since the appropriate chi-square value is 5491.093 which are significant at 1% level, the test leads to the rejection of the null hypothesis. The value of KMO statistics (0.764) was also large and it revealed that factor analysis might be considered as an appropriate technique for analyzing the correlation matrix. The following communality table shows the initial and extraction values.

Table 3 Communalities

Variables	Initial	Extraction
Attending training is very enjoyable	1	0.597
Teaches new methods and techniques to improve the performance	1	0.598
Encourage me to work as committed in producing high quality work	1	0.632
Enable me to be adoptable and competent to the skill required	1	0.552
Enable me to learn how to do my job better	1	0.629
Enable me to learn things that are relevant to my needs	1	0.515
Teaches me to work safer	1	0.555
Use certain skills but lost many as I was not using them	1	0.689
Emerging New technologies are psychological turbulence throughout your career	1	0.648
Training helps people to acquire knowledge and awareness in the subject	1	0.481
Training given helps me to do my job effectively and efficiently	1	0.683
Actual training given and the real working environment are entirely different	1	0.573
Training given increases my self-confidence and helps me to handle stress in the working condition	1	0.552
I am satisfied with the present methods and quality of training	1	0.537
Training helps me to maintain good relationship with my superior, colleagues and subordinates	1	0.678
Training normalizes the rate of transfer and turnover retention	1	0.374
Bottlenecks and deadlines can be met through training	1	0.432
I think that a good training program changes your attitude and produces amazing results in your career	1	0.676
Timing of training session is convenient	1	0.692
I am attending the training program regularly	1	0.594
Extraction Method: Principal Component Analysis.		

Table 4

Total Variance Explained									
Comp onent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.628	23.139	23.139	4.628	23.139	23.139	2.327	11.637	11.637
2	2.049	10.244	33.384	2.049	10.244	33.384	2.212	11.059	22.696
3	1.532	7.658	41.041	1.532	7.658	41.041	2.159	10.794	33.49
4	1.372	6.861	47.903	1.372	6.861	47.903	1.964	9.821	43.311
5	1.081	5.405	53.307	1.081	5.405	53.307	1.787	8.935	52.247

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6	1.027	5.137	58.444	1.027	5.137	58.444	1.24	6.198	58.444
7	0.946	4.73	63.174						
8	0.823	4.115	67.289						
9	0.806	4.028	71.317						
10	0.78	3.9	75.216						
11	0.728	3.641	78.857						
12	0.666	3.329	82.186						
13	0.6	3.002	85.187						
14	0.559	2.793	87.98						
15	0.505	2.527	90.507						
16	0.465	2.323	92.83						
17	0.427	2.136	94.966						
18	0.389	1.946	96.911						
19	0.325	1.623	98.534						
20	0.293	1.466	100						
Extraction Method: Principal Component Analysis									

From table No. 4 it was observed that the labeled “Initial Eigen values” gives the Eigen values. The Eigen value for a factor indicates the “Total Variance” attributed to the factor. From the extraction sum of squared loadings, it was learnt that the first factor accounted for a variance 4.628 which was 23.139%, the second factor accounted for the variance 2.049 which was 10.244%, the third factor accounted for the variance 1.532 which was 7.658%, the fourth factor accounted for the variance 1.372 which was 6.861%, the fifth factor accounted for the variance 1.081 which was 5.405% and the sixth factor accounted for the variance 1.027 which was 5.137%. Thus all the six variables put together explain the total percentage of variance with 58.444 per cent.

Determination of factors based on Eigen values

In this approach only factors with Eigen values greater than .4 are retained and the other factors are not included in this model. The two components possessing the Eigen values which were greater than .4 were taken as the components extracted.

Table 5 COMPONENT MATRIX (a)

Variables	Component					
	1	2	3	4	5	6
Training helps people to acquire knowledge and awareness in the subject	0.62					
Training helps me to maintain good relationship with my superior, colleagues and subordinates	0.61					-0.45
Encourage me to work as committed in producing high quality work	0.56					
Teaches new methods and techniques to improve the performance	0.54			-0.48		
I am attending the training program regularly	0.53		-0.49			
Training normalizes the rate of transfer and turnover retention	0.53					
Enable me to learn things that are relevant to my needs	0.52					
Training given increases my self-confidence and helps me to handle stress in the working condition	0.52					
Bottlenecks and deadlines can be met through training	0.52					
Training given helps me to do my job effectively and efficiently	0.51				-0.51	

Enable me to learn how to do my job better	0.48		0.426			
Actual training given and the real working environment are entirely different	0.44			0.432		
Timing of training session is convenient		0.69				
Emerging New technologies are psychological turbulence throughout your career	0.45	0.53				
I am satisfied with the present methods and quality of training	0.46	0.49				
Attending training is very enjoyable	0.41	0.47		-0.43		
Teaches me to work safer			0.616			
Enable me to be adoptable and competent to the skill required			0.53			
Use certain skills but lost many as I was not using them	0.41				0.59	
I think that a good training program changes your attitude and produces amazing results in your career						0.496
Extraction Method: Principal Component Analysis.						
a. 6 components extracted.						

Table 6 ROTATED COMPONENT MATRIX (a)

Variables	Component					
	1	2	3	4	5	6
Training helps me to maintain good relationship with my superior, colleagues and subordinates	0.78					
I am attending the training program regularly	0.64					
Training helps people to acquire knowledge and awareness in the subject	0.59					
I am satisfied with the present methods and quality of training	0.43		0.423			
Training normalizes the rate of transfer and turnover retention	0.43					
Encourage me to work as committed in producing high quality work		0.74				
Enable me to learn how to do my job better		0.65			0.41	
Enable me to learn things that are relevant to my needs		0.6				
Teaches new methods and techniques to improve the performance		0.6				
Timing of training session is convenient			0.745			
Emerging New technologies are psychological turbulence throughout your career			0.742			
Attending training is very enjoyable			0.683			
I think that a good training program changes your attitude and produces amazing results in your career				0.749		
Training given helps me to do my job effectively and efficiently		0.45		0.595		

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Training given increases my self-confidence and helps me to handle stress in the working condition				0.575		
Bottlenecks and deadlines can be met through training				0.495		
Enable me to be adoptable and competent to the skill required					0.69	
Teaches me to work safer					0.64	
Actual training given and the real working environment are entirely different					0.47	0.428
Use certain skills but lost many as I was not using them						0.722
Extraction Method: Principal Component Analysis.						
Rotation Method: Varimax with Kaiser Normalization. ^a						
a. Rotation converged in 9 iterations.						

The rotated component matrix shown in table 6 is a result of VARIMAX procedure of factor rotation. Interpretation is facilitated by identifying the variables that have large loadings on the same factor. Hence, those factors with high factor loadings in each component i.e. values greater than 0.4 were selected. In the above table, the statements 15, 20, 10, 14 and 16 were grouped together as factor 1 and accounted for 23.139% of the total variance and have been named as 'Attainable'. The statements 3, 5, 6, 2 and 11 were grouped together as factor 2 and accounted for 10.244% of the total variance and have been named as 'Profession-able'. The statements 14, 19, 9 and 1 were grouped together as factor 3 and accounted for 7.658% of the total variance and have been named as 'Agreeable'. The statements 18, 11, 13 and 17 were grouped together as factor 4 and accounted for 6.861% of the total variance and have been named as 'Makeable'. The statements 5, 4, 7 and 12 were grouped together as factor 5 and accounted for 5.405% of the total variance and have been named as 'Adoptable'. The statements 12 and 8 were grouped together as factor 6 and accounted for 5.137% of the total variance and have been named as 'Acceptable'. Thus the factor analysis condensed and simplified the 20 statements and grouped them into 6 factors explaining 58.444% of the variability of all the statements. From the analysis, it is evident that out of 20 statements of opinion of the employees towards training programmes, 20 statements were grouped into 6 component factors and were termed as Attainable, Profession-able, Agreeable, Makeable, Adoptable and Acceptable.

SUGGESTIONS

The training programme which is organized by the select IT industries should result in effective co-ordination among the employees.

The employees' feedback can be obtained about the training given by the select IT industries, Coimbatore. So that training can be improved further to their expectations and thus the accomplishment of objectives could be made easier.

The employees have to be given a motivation on how important training is in order to meet the routine problems and rewards can be given to the person who attends the training consistently.

CONCLUSION

We can see that the organizational training has great impact on employees. If the organizational training is not good it will adversely affect the employees. The select IT industries in Coimbatore are very conscious of the needs of the employees and does it best to keep the training to its workers. In this study employees' in select IT industries (CTS, INFOSYS, EBIX, HCL, KGISL, WIPRO, DELL, PAYODA, ADITI, UGAM SOLUTIONS) in Coimbatore shows greater importance to the training, also they are in the view that training is an important component for the new and existing employees. It increases performance and satisfaction level in the job.

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