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A Study on Employee Training Effectiveness – A Study with Special Reference to Cashew Day, Surat

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Abstract

Providing training to the employee is an essential function of the human resource department of any organization irrespective of their skills and experience. Designing relevant and timely training programs may lead to increased productivity and morale of the employee. This study focuses on the factors affecting training effectiveness and also measures the relationship with certain demographic factors for the organization Cashew Day, Bardoli. To fulfill the given objectives, the study employed statistical tools such as factor analysis, Mann Whitney U test, and Kruskal Wallis Test. The necessary primary data have been sourced from the structured questionnaire and secondary data from books, journals, and website. Based on the findings, the researcher has suggested that five significant factors have to be considered for training effectiveness as proper training planning, materials, and physical infrastructure, trainer's competence and post-training learning and implementation. Further, the study is useful to the human resource manager to design a training module and employee performance.

Key Words: Training Effectiveness, Factor Analysis, Parametric and Non-parametric test.

1. Introduction

Training refers to a core concept in Human Resource Development. It deals with developing a particular skill to the desired standard as instructed and practiced. Training is a highly useful tool that can bring an employee or worker into a position where they can perform their job more effectively, efficiently and conscientiously. Training is the procedure of increasing the knowledge and skill of an employee or worker for indulging in a particular job. Mechanization, computerization, and automation have resulted in many changes which require trained employees and workers. The organization must train its employees and workers to enrich them with the dynamic world. With the modern aggravated problems of the world, the organization must help the employees and workers to cope up with the complexities. The stability and enhancement of the organization always depend on the training imparted to their employees and workers.

2. Literature Review

Aziz S.F. (2013), "Measuring Training Effectiveness: Evidence from Malaysia" studied Global issues that have emphasized the importance of training effectiveness as the essence of developing and managing quality human resources. The technique used was coefficient of correlation. Subsequently, this effort supported the improvement of quality human resources in public sector for effective national policies implementation. Chidambaram V., Ramachandran A. (2012), "Study on Efficiency of Employee Training" studied related to success of any organization depends on appropriate use of human assets available in the organization. He has used both the primary and the secondary data for the purpose of this study. The results are based on the analysis done on the data collected from respondents. This summarizes the results of the literature review on the effectiveness of training programmers' of employees from diverse perspective. Lynda S.R. (2010), Systematic Literature Review of Effectiveness of Training and development for the Protection of Workers . For the purpose of research study, the method of simple random sampling is undertaken. It conclude that the organization need to modify the reward system of the employees and promotions must be given based on merit, educational qualification and experience, and if these factors are given little more care. They

strongly suggest that decisions-maker consider more than just training when addressing a risk in a workplace, since large number of training alone cannot be expected. Neetima Agarwal. (2014), "Evaluating Training Effectiveness"**.** The researcher focuses on how to make the Training Programs more effective. The major focus of the study is to identify the skill required at diverse hierarchical level in all sectors of the IT Industry, to identify the importance and utility of every skill segment on which training needs to be imparted. The sample size was 100. The researcher used statistical techniques with SPSS calculated one sample t test and factor analysis. Norsiah B.M., Mohammed S.A, "Evaluation of Effectiveness of Training & Development". He used questionnaires and collected data through snowball sampling method technique in the research study. In his study the data were collected keeping in consideration feature such as age, gender, managerial position and tenure of job. He concluded in his research that the training would be effective if proper feedback was collected. He reviewed the model of training effectiveness for the adoption by the human resources development executives in their planning, designing and implementation training program.

3. Research Methodology

The objective of the study is to find out the factors affecting training effectiveness in the organization and to measure the training effectiveness among employee. Further, it aims at finding the relationship between demographic variables and factors extracted for training effectiveness. Descriptive research has been used in this research because it describes in detail what, when, where and how the training is effective in the organization. The researcher has collected the primary data through a well-structured questionnaire and secondary data through the journals, newspapers, and discussion with the employees. 100 employees have been chosen using non-probability convenience method. The statistical tools such as factor analysis and other non-parametric tests have been used. The study is useful to the HR manager to measure the training effectiveness and tie the rewards accordingly. Further, it is useful to design a training module for a trainer and an organization.

4. Objectives of Study

- To measure the training effectiveness among employee in Cashew Day.
- To find out the factors affecting training effectiveness in various designations and to know the effectiveness of training programme on Employees at every level.

5. Limitations of Study

- Response Bias
- Limited to one particular organization.

Hence, the results are not generalized in nature. It is subject to change according to the perceptions and opinion of the respondents. The study is based on the certain factors which were discussed by the researcher.

6. Data Analysis

Factor Analysis: Before moving to perform exploratory factor analysis, the study has gone through the following general assumptions to carry out further analysis. Assumptions for factor analysis are not compulsory to be fulfilled but it is desirable.

Assumptions:

- Minimum of 100 sample size: With 5 sample size (respondents) for each variable is considered to be the ideal situation for carrying out factor analysis and in case of more number of variables, 200+ sample sizes is desirable.
- Normality: Data should be normally distributed where mean, median and mode of the data collected are equal. If normal distribution attains then the outcome will be strong and can draw more conclusion; but normality is not mandatory.
- Linearity: Further data needs to show the linear relationship among the variables. This assumption is also not mandatory for carrying out factor analysis.
- Factorability of correlation matrix: Correlation matrix shows the correlation coefficient between the variables and we try to get those variables which are strongly correlated with each other.

Assumptions listed above are subject to their intensity. Few of them are part of methodology and few can be tested in analysis part. Checking for all assumptions are not compulsory but if all assumptions met than output will be more precise and strong conclusions can be drawn from the factors obtained. Followings are the SPSS outputs and interpretations for factor analysis.

Table No: 1
Reliability Statistics

Cronbach's Alpha	Number of Items
0.772	25

Source: SPSS Output

The table No:1 represents the reliability statistics for 25 items to be studied. Total 25 variables are taken for carrying out factor analysis. Before moving to factor analysis, we are testing for reliability of instrument so the Cronbach's Alpha model is applied. There are other methods available for reliability testing like split-half, Guttman, Parallel and Strict Parallel. Further the study has cronbach's Alpha value 0.772 which seems very high with a standard value of 0.6. So we can say that there is a high level of internal reliability among the items included in the instrument.

KMO and Bartlett's Test:

Hypothesis:

Ho: Samples are not adequate to perform factor analysis

Ha: Samples are adequate to perform factor analysis

Table No: 2
KMO and Bartlett's Test Statistics

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.692
Bartlett's Test of Sphericity	Approx. Chi-Square	1434.743
	Df	231
	Sig.	0.000

Source: SPSS Output

The Table No: 2 shows the result of KMO (Kaiser-Meyer-Olkin) and Bartlett's Test. The data KMO value is 0.692 which is much higher than the standard value. Bartlett's test of Sphericity tests the null hypothesis that the original correlation matrix is an identity matrix. Bartlett's test significance value is 0.000 which is less than 0.05. The factor analysis is appropriate and further analysis can be done.

Table No: 3
Explained Variance and Eigen value

Component	Initial Eigen values			Rotation Sums of Squared Loadings		
	Total	Variance (%)	Cumulative (%)	Total	Variance (%)	Cumulative(%)
1	3.685	16.751	16.751	2.229	10.132	10.132
2	1.662	7.552	24.303	1.740	7.907	18.039
3	1.598	7.265	31.569	1.699	7.724	25.763
4	1.527	6.941	38.510	1.571	7.139	32.902
5	1.329	6.042	44.552	1.458	6.628	39.530
6	1.241	5.642	50.194	1.422	6.465	45.995
7	1.141	5.188	55.382	1.395	6.339	52.334
8	1.035	4.705	60.087	1.391	6.321	58.655
9	1.024	4.657	64.744	1.340	6.089	64.744
10	.895	4.069	68.813			
11	.838	3.811	72.624			
12	.773	3.513	76.137			
13	.719	3.267	79.405			
14	.638	2.901	82.306			
15	.598	2.719	85.025			
16	.576	2.620	87.645			
17	.538	2.446	90.090			
18	.534	2.426	92.516			
19	.493	2.241	94.756			
20	.429	1.951	96.707			
21	.382	1.736	98.443			
22	.343	1.557	100.000			

Source: SPSS Output

The table No:3 shows the result of total variance explained by all extracted factors by using Principal Component Analysis (PCA). The table also shows that two broad categories of column consists initial eigen value and rotated sums of square loadings. Together all 9 factors explains 64.744% of variance on dependent variable.

Table No: 4
Rotated Component Matrix

	Component						
	1	2	3	4	5	6	7
S10	0.737						
S9	0.634						
S17	0.591						
S11	0.588						
S22		0.801					
S23		0.628					
S21		0.622					
S5			0.740				

S3			0.574				
S19			0.525				
S7				0.781			
S8				0.713			
S14					0.779		
S13					0.640		
S16						0.748	
S15						0.680	
S2							0.712
S18							0.540

Source: SPSS Output

Table No: 4 represents the rotated component matrix which gave 7 factors after a Varimax rotation. Since factor analysis first carried out without rotation and with all 25 items that gives us only component matrix with 9 factors. The above matrix contains the loadings of each variable onto each factor. Varimax rotation has been applied to simplify the loadings but still research could not get clear idea about the factors so finally two factors were removed which doesn't have any item/variable.

Table No: 5
Factor Summary

Sr. No.	Factors	Explanation Power (%)
1	Proper Training Planning	15.696
2	Material and Physical Infrastructure Provided	14.986
3	Trainer's Competence	11.820
4	Post Training Learning and Implementation	9.164
5	AVOIDED	8.534
	Total	**60.2**

Normality Test:

Before moving for further statistical hypothesis testing, it demands the data should be normally distributed. So following is the normality test output with interpretation for factor score generated from the factor analysis.

H0: Data are normally distributed
H1: Data are not normally distributed

Table No: 6
Tests of Normality

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
REGR factor score 1 for analysis 1	.137	100	.000	.928	100	.000
REGR factor score 2 for analysis 1	.116	100	.002	.958	100	.003
REGR factor score 3 for analysis 1	.069	100	.200	.947	100	.001
REGR factor score 4 for analysis 1	.097	100	.021	.978	100	.086
REGR factor score 5 for analysis 1	.142	100	.000	.920	100	.000

Source: SPSS Output

The above table represents the normality test statistics from Kolmogorov-Smirnov and Shapiro Wilk test. Looking to the probability value of both the test, data are not normally distributed because probability values are less than 0.05 so we reject the null hypothesis. So the study cannot employee parametric test. Following is the output of non-parametric test with interpretation.

Training Effectiveness (Mann-Whitney U Test)

H0: There is no significant difference between employees and workers regarding factors affecting training effectiveness.

H1: There is some significant difference between employees and workers regarding factors affecting training effectiveness.

Table No: 7
Mann-Whitney U Test

	Designation of Employee	N	Mean Rank	Test Statistics	Prob. Value
Proper Training Planning	Worker	79	52.03	709.000	0.308
	Employee	21	44.76		
	Total	100			
Material and Physical Infrastructure Provided	Worker	79	54.16	540.000	0.014
	Employee	21	36.71		
	Total	100			
Trainer's Competence	Worker	79	51.11	781.000	0.681
	Employee	21	48.19		
	Total	100			
Post Training Learning and Implementation	Worker	79	51.76	730.000	0.400
	Employee	21	45.76		
	Total	100			

Source: SPSS Output

The above table represents the Mann Whitney u test statistics, where all the probability values are greater than 0.05 except factor viz., Material and Physical Infrastructure Provided, Hence the researcher interprets that there is no significant difference between employees are workers regarding

all factors expect materials and physical infrastructure. Mean rank difference is very high and significant in material and infrastructure provided that means company is providing different materials and physical infrastructure for employees and workers.

Training Effectiveness (Kruskal Wallis)

H0: There is no significant difference among experience categories regarding factors affecting training effectiveness.

H1: There is some significant difference among experience categories regarding factors affecting training effectiveness.

Table No: 8
Mann-Whitney U Test

	Experience	N	Mean Rank	Test Statistics	Prob. Value
REGR factor score 1 for analysis 1	Newly Joined	41	52.28	2.347	0.309
	1 to 2 years	36	44.90		
	More than 2 Years	23	56.09		
	Total	100			
REGR factor score 2 for analysis 1	Newly Joined	41	47.82	1.503	0.472
	1 to 2 years	36	49.49		
	More than 2 Years	23	56.87		
	Total	100			
REGR factor score 3 for analysis 1	Newly Joined	41	48.43	1.501	0.472
	1 to 2 years	36	48.71		
	More than 2 Years	23	57.00		
	Total	100			
REGR factor score 4 for analysis 1	Newly Joined	41	46.82	1.166	0.558
	1 to 2 years	36	53.71		
	More than 2 Years	23	52.04		
	Total	100			
REGR factor score 5 for analysis 1	Newly Joined	41	50.62	4.580	0.101
	1 to 2 years	36	56.88		
	More than 2 Years	23	40.30		
	Total	100			

Source: SPSS Output

7. Findings

It was found that the majority of the workforce is labor working in the factory. Newly joined employees are found to be the highest. From pre-training variables, it was found that the majority of employees strongly agree with the importance given to training, and enough planning. Very few are found to be neutral and dis-agree in consultation of the employee before training and attendance. Further 5 factors are very important for the organization to be considered while carrying out any training program viz. Proper Training Planning, Material, and Physical Infrastructure Provided, Trainer's Competence, Post Training Learning, and Implementation. Using mann-whitney test, the researcher found that there is no significant difference between employees and workers in all factors except materials and infrastructure.

8. Conclusions

The purpose of the study is to measure the effectiveness of training in the organization, based on the analysis and findings, the study concludes that training provided by the organisation to their workers and admin staffs are effective to achieve their goal, to perform better and to increase the efficiency in performance. Further, this study can conclude that the organization has to give more importance to five major factors such as Proper Training Planning, Material and Physical Infrastructure Provided, Trainer's Competence, Post Training Learning, and Implementation.

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