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## Impact of Employee Training and Development on Organizational Productivity in IT Industry of Chennai city

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**Ramya Krishna K. M**  
Admission Officer  
Rajalakshmi Institutions, Chennai  
[s.ramyagokul@gmail.com](mailto:s.ramyagokul@gmail.com)

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### Abstract

This research article aims “To measure the impact of training and development attributes on organizational productivity.” The paper applies data reduction using Reliability Test, Exploratory Factor Analysis and Multiple Linear Regression on a sample of 328 respondents drawn from 5 IT companies in the Chennai and condenses a set of 12 training and development statements converted into a two factors. The present study proposes a model of the impact of employee training and development on organizational productivity of IT companies. The present study proposes a model of the impact of employee training and development on organizational productivity of the IT companies. The study found that training and developments are impacting significantly the organizational productivity of the IT companies. Therefore, IT people should focus on the above factors to provide enrich employee training and development. The study investigated the impact of employee training and development on organizational productivity of the IT companies, concluded that employee training and developments are impacting significantly the organizational productivity of the IT companies.

**Keywords:** Employee, Training, Development, Organizational Productivity and IT Industry.

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### Introduction

The success of a training program majorly depends on the identification of parameters of training, which should happen in a proper fashion as well as very frequently, preferably every quarter. There are several issues that needs the attention as to how the training requirement will be identified, what has been the gaps of the previous training program, what will be the size of the target group of training and the most important matching the training with the strategic objectives of the company. These are the important points, which require critical attention from the Human Resource professionals in order to assess the training needs. Usually companies have their own system to identify training needs. However, need identification task can be harmful in few cases if the needs are not identified systematically and supported with effective programs. Managers must study that their proposals are grown due consideration and suitable actions are initiated to satisfy the felt needs. Only then, they will take this exercise seriously. Hence, planning of suitable and need based training programs and their timely implementation is very

important for the success of any training program. If the training program is constructive and carries practical evaluation of training it substantially helps the organizations in reducing the costs of training programs. Effective training design: It pitches an emphasis on those parameters of a training system which matter a lot, such as proper laying down of objectives and setting parameters on how these objectives will be measured. Enhanced expert esteem: Training professionals can lead to enhanced stature of any organization.

### **Review of Literature**

According to Ganesh, M., Indradevi R., (2015), Training and development plays an important role in the effectiveness of organizations and to make people to do work effectively & efficiently. It is said that training has implications on productivity, commitment to the work and personal development. All companies must train people and develop their staff. Most of the organizations are aware of this requirement and invest and do many things for training and development.

Velmurugan P. S., (2009) Training is the periscope to see the future. It is intended to identify the future of the organization to develop and steer them. Development creates generalists and helps people to think strategically, even when their present jobs do not call for such thinking. It pushes and stretches people beyond their present function. Swaminathan, J. and Gowri Shankar, U., (2011). This paper tries to conclude that training is the act of increasing the knowledge and skill of an employee for doing a particular job. The training is to acquire new skill, technical knowledge, problem solving, etc. It improves the performance of employees on present jobs and prepares them for taking up new assignments in the future. Training also helps in the growth of the employees. The main objective of the study is to measure the effectiveness of the training in the organization and its impact on employee job performance.

Chris Obisi (2011) The ultimate aim of any training program is to add value and once a training program cannot add value, it should be reworked or altogether revoked. Acquisition of new skills is only possible with Training Programs and without skills organizations will not achieve its objectives through people. Some organizations see training as an expensive venture and may put embargo on training and utilize the money for other projects in the organization. Scott Brum, University of Rhode Island (2007) To gain an advantage amongst competitors training is of great importance to companies. There is significant debate among professionals and scholars as to the affect that training has on both employee and organizational goals. Chidambaram, Vijayabanu, Ramachandran, Amudha (2012) The success of any organization depends on appropriate use of human assets available in the organization. All other assets could only be supplementary to human assets. Towards augmenting the human resources and to cope with changes – both internal and external, the organization has to concentrate necessarily on developing the ability, wisdom and skills of its workforce which is possible through training programs.

Aidah Nassazi (2013) According to this study “effects of training on employee performance.” Employees are major assets of any organization. The active role they play towards a company’s success cannot be underestimated. As a result, equipping these unique assets

through effective training becomes imperative in order to maximize the job performance. Bhatia et al., (2014), Training is a medium to bring continuous improvement in the quality of work performed; it would equip employees with necessary knowledge, skill, abilities and attitude to perform their jobs. **Sanchita, Y. R. M., & Shyamaladevi, B. (2021)**. the authors tried to depict the importance of factors affecting training effectiveness vis-à-vis managerial implications and future research directions The findings of this study suggest many factors which affects training effectiveness like motivation, attitude, emotional intelligence, support from management and peers, training style and environment, open-mindedness of trainer, job related factors, self efficacy and basic ability etc. Ambika Bhatia & Lovleen Kaur (2014) In today's era employees are not keen to join an organization where their Knowledge and skills are not upgraded. Many organizations provide opportunities for learning and use it as a retention tool. Results prove that training and development are positively correlated and claimed significant statistical relationship with employee performance and effectiveness.

Veekesy Polymers Pvt Ltd. adopted a training and development program that mainly focuses on areas like job oriented trainings, technical skills, knowledge and quality aspects. Most of the respondents were satisfied with the present training methods and also rated it as good and excellent towards the quality and effectiveness of the program. The program had to concentrate on people who are dissatisfied with the training. Training ought to be based on the need of the organization. It must benefit the personnel in terms of performance and learning which will thus influence the organization. As it may be, a portion of the small scale and full scale establishments intended to prepare and equip representatives with the essential aptitudes and learning are not doing very well in terms of number of individuals these institutions prepare. Raja Abdul Ghafoor Khan, Ahmed Khan and Dr. Muhammad Aslam Khan (2011) The findings suggest that training and development, delivery style, on the job training and training design have an effect on Organizational Performance which means it increases the overall organizational performance.

Pilar Pineda (2010). It has been found that the way in which organizations assess their training is long way from what would be desirable in order to evaluate its effect on employees. This precarious situation is due to the numerous difficulties engaged in assessing training and an inability to comply with certain fundamental requirements of existing evaluation systems. Any evaluation plan must consider a series of progression of prerequisites that guarantee that the assessment is completed in the best way. Compliance with these requirements is the initial move towards overcoming the difficulties Winfred Arthur Jr, Winston Bennett Jr, Pamela S. Edens and Suzanne T. Bell (2003) They discovered a particular training design and evaluation features and then used meta-analytic procedures to empirically assess their relationships to the effectiveness of training in organizations. The outcomes of these authors recommend that the training method used, the skill or task characteristic trained, and the choice of training evaluation criteria are identified with the watched viability of preparing programs.

Gregory Morwood (1998) Most organizations allocate part of their operational resources, staff and annual budget to general training. Business community training must also fall inside the

general structure for training within an organization and be allocated an appropriate priority within it plan, while also plotting how different groups will support these activities. Awareness training should be conducted for the personnel upon the establishment of the initial business community plan or following essential changes to it. It should also be conducted for all newly recruited personnel during induction training and for staff who have moved into positions with new responsibilities under the plan. Ann P. Bartel (1994). The major finding is that businesses that were working below their expected labor productivity levels in 1983 actualized new employee training programs after 1983 which brought about significantly larger increases in labor productivity growth between 1983 and 1986. The constructive outcomes of training execution on productivity growth were appeared to be inconsistent with a "Hawthorne Effect" interpretation in the light of the fact of new personnel policies other than training did not have significant effects on productivity growth. Formal employee training programs are unique in their ability to bring below- average firms up to the performance level of practically identical businesses. Lee, O. F. (2006). The path-analytic outcomes for the elective model recommend the presence of a number of various important causal relationships. The path coefficients for the links between response to skill assessment and reaction to training, job inclusion and career planning, work association and learning, and career planning and conduct change were all statistically significant. Trainee response to ability appraisal was an essential antecedent of satisfaction with the training program. Trainees who responded emphatically to the requirements appraisal technique were more likely to be happy with the training program content than were trainees who couldn't help contradicting the evaluation of their expertise needs. Career planning was observed to be an important prerequisite for development in actual on-the-job behavior as a result of participation in the training program. Perhaps, people who have a career strategy are more willing to apply training content to their work on an account of a consciousness of the relationship between behavior improvement and career mobility. Those trainees who have contemplated or planned the moves they may make to pick up the school principal ship might be more cognizant of how changes in their conduct in the manner advocated by the training program will enhance their managerial abilities and chances for advancement.

### **Research Problem**

In an organization, the most important task is to place the right employee in the right position, otherwise organizations would try "to fit a square peg in a round hole". At the point when individuals perform tasks that sometimes fall short or rather the absence of motivational factors will be clearly grievous. Lower levels of profitability, disappointment among people in organization, low spirit, and other negative practices will get to be normal till the employees is demonstrated the stoop. For this, organizations need to have a vision, mission and a well-defined strategy for future recruitments. Today, India has become the capital of outsourcing for the world and this has created a set of HR challenges for manager. The most concerning issue for today's managements are highly motivated graduates that are turning out to be rare.

### **Research objectives**

1. To identify the training and development attributes in IT Industry.

2. To measure the impact of training and development attributes on organizational productivity of IT companies.

### Research Hypothesis

- **Ho1:** There is no significant relationship between training and development attributes and organizational productivity of IT companies.

### Statistical Tools

- Reliability Test
- Exploratory Factor Analysis
- Multiple Linear Regression

### Research Methodology

#### Sampling Procedure

An attempt was made to contact the IT companies in Chennai through emails as majority of IT companies are located in this city in South India. In response to this 11 companies have positively responded and permitted to do research. As many as 750 questionnaires were mailed to professionals in these 11 companies. Out of them significant number of questionnaires were received from 5 companies and to a maximum of 70 each only as the information on the said topic was not familiar and comprehensible to many. Further professionals beyond team leader only are taken in the sample frame as they only would have a say in the training and development. The five companies are thus selected purposively. The select five companies are as follows.

Table: 1. List of IT Companies

S. No.	IT Companies
1	Accenture
2	TCS
3	IBM
4	Infosys
5	Wipro

Where ever the number of questionnaires filled in all aspects is less than 70, further attempts are made to reach the quota of at least 70 by adopting quota sampling. Out of the received filled in questionnaires, 328 were with full information in all aspects. Hence the sample size is 328 IT professionals. While selecting professionals of the 5 IT companies care has been taken to cover them from different locations.

#### Sample size

As many as 350 questionnaires were mailed to professionals in the select IT companies. Out of the received filled in questionnaires, 328 were with full in all respects. Hence the sample size is 328 professionals.

**Analysis & Results**  
**Reliability Test**

**Table: 2. Case Processing Summary**

		N	%
Cases	Valid	328	100.0
	Excluded <sup>a</sup>	0	.0
	Total	328	100.0

a. Listwise deletion based on all variables in the procedure.

**Table: 3. Reliability Statistics**

Cronbach's Alpha	N of Items
.872	12

The internal consistency of the questionnaire of 12 questions with a value of the Cronbach's Alpha is 0.872, which shows that data is 87.2 per cent reliable.

**Exploratory Factor Analysis**

**Table: 4. KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.863
Approx. Chi-Square	1761.661
Bartlett's Test of Sphericity	Df
	66
	Sig.
	.000

Before proceeding for factor analysis the eligibility of the data has to be tested by conducting KMO- Bartlett's test. This test is a measure of sampling adequacy and multivariate normality among variables. The KMO value in this study is  $0.863 > 0.5$  which says that the sample taken is adequate. Bartlett's Test of Sphericity value is  $0.000 < 0.05$ , indicate multi normality among variables. Hence Factor Analysis is considered as an appropriate technique for further analysis of the data.

**Eigen Values**

The initial components are the numbers of the variables used in the Factor Analysis. However, not all the 12 variables will be retained. In the present research, only the 2 factors will be extracted by combining the relevant variables. The Eigenvalues are the variances of the factors. The total column contains the Eigenvalue. The first factor will always account for the most variance and hence have the highest Eigenvalues. The next factor will account for as much of the leftover variance as it can and the same will continue till the last factor. The percentage of variance represents the per cent of total variance accounted for by each factor and the cumulative percentage gives the cumulative percentage of variance account by the present and the preceding factors. In the present research, the first 2 factors explain 55.197 per cent of the variance. The rotation sums of the squared loading represent the distribution of the variance after the varimax

rotation with Kaiser Normalization. The varimax rotation tries to maximize the variance of each of the factor.

**Table: 5. Total Variance Explained**

Component	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	5.102	42.517	42.517	5.102	42.517	42.517	3.348	27.901	27.901
2	1.522	12.680	55.197	1.522	12.680	55.197	3.276	27.296	55.197
3	1.277	10.641	65.838						
4	.830	6.920	72.758						
5	.629	5.238	77.997						
6	.522	4.353	82.350						
7	.480	3.999	86.349						
8	.437	3.643	89.992						
9	.357	2.972	92.964						
10	.344	2.865	95.829						
11	.294	2.454	98.283						
12	.206	1.717	100.000						

Extraction Method: Principal Component Analysis.

On the basis of Varimax Rotation with Kaiser Normalization, 2 factors have been extracted. Each factor is constituted of all those variables that have factor loadings greater than 0.5. 12 variables were clubbed into 2 factors. 2 factors were extracted from the 12 variables used in the study. These 2 extracted factors explained 55.197 per cent of the variability in training and development of IT employees.

**Rotated Component Matrix**

The Rotated Component Matrix represents the rotated factor loadings, which are the correlations between the variables and the factors. The factor column represents the rotated factors that have been extracted out of the total factor. These are the core factors, which have been used as the final factor after data reduction.

**Table: 6. Rotated Component Matrix<sup>a</sup>**

Statements	Component	
	Training	Development
Career progression is based on individual work performance	.709	
our organization conducts extensive training program for its employees in all aspects of quality	.664	
Employees are assisted in planning their career advancement	.655	
Employees in each job will normally go through training programs every year	.653	
A trainee is encouraged to raise questions during training	.610	

There are formal training programs to teach new employees the skills they need to perform their jobs	.610	
Training needs identified are realistic, useful and based on the business strategy of the organization	.550	
Training focuses on problem solving and decision making		.843
Job security and stability are guaranteed to employees		.823
A trainee has been given an opportunity to perform learned skills		.785
Self-confidence is built through feedback and positive reinforcement		.635

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

The above matrix gives the correlation of the variables with each of the extracted factors. Usually, each of the variables is highly loaded in one factor and less loaded towards the other factors. To identify the variables, included in each factor, the variable with the maximum value in each row is selected to be part of the respective factor. The values have been high lightened in each of the rows to group the 12 variables into 2 core factors excluding low loading variables.

### Multiple Linear Regression

In order to access the impact of training and development on organizational productivity, enter a method of multiple regressions was applied.

**Table: 7. Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.554 <sup>a</sup>	.507	.503	.744	1.722

a. Predictors: (Constant), Development, Training

b. Dependent Variable: Organizational Productivity

R: R represents the multiple correlations co-efficient with the range lies between -1 and +1. Since the R-value is 0.554 means that there is a high positive relationship between the employee training and development on organizational productivity of the IT companies.

R Square: R<sup>2</sup> represents the coefficient of determination which lies between 0 and 1. Since the R square value is 0.507 i.e. 50.7 per cent of the explained variation is there in the employee training and development on organizational productivity of the IT companies.

Durbin-Watson statistic: From the above table 7 the Durbin-Watson statistic value is 1.722. It is closer to the standard value 2. So, that the assumption has almost certainly been met.

**Table: 8. ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.880	2	39.940	72.071	.000 <sup>b</sup>
	Residual	180.108	325	.554		
	Total	259.988	327			

a. Dependent Variable: Organizational Productivity



b. Predictors: (Constant), Development, Training

The ANOVA (Table 8) reveals that the F statistics of the regression model is statically significant at 0.05 levels implying the goodness of fit of the regression equation. (Model is statistically significant).

**Table: 9. Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.676	.157		10.672	.000
Training	.139	.045	.173	3.062	.002
Development	.390	.050	.436	7.721	.000

a. Dependent Variable: Organizational Productivity

Table 9 denotes standardized regression coefficients which show the strength of impact and its positive/negative direction. It also comprises of t and significant values to validate the hypothesis framed to measure the significant impact of employee training and development on organizational productivity of the IT companies.

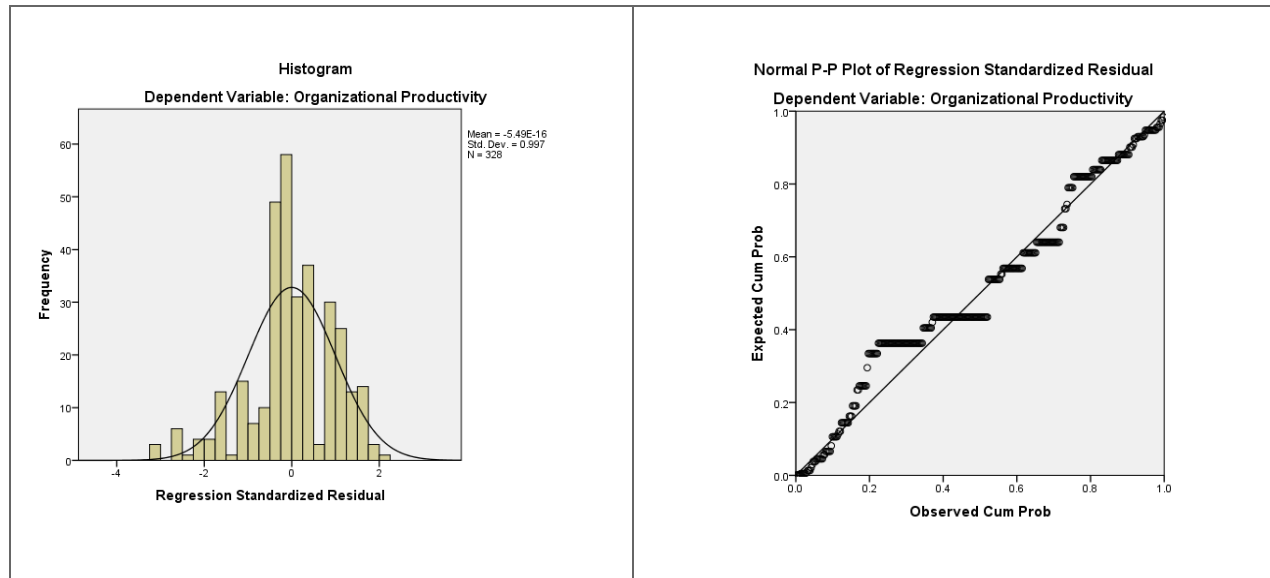
### **Training**

Table 9 shows Beta value as 0.173 which indicates positive impact of employee training on the organizational productivity of the IT companies. Since the T value is 3.062 and significance value is 0.002 which is less than 0.05, so the employee training has a significant impact on organizational productivity of the IT companies.

### **Development**

Table 9 shows Beta value as 0.436 which indicates positive impact of employee development on the organizational productivity of the IT companies. Since the T value is 7.721 and significance value is 0.000 which is less than 0.05, so the employee development has a significant impact on organizational productivity of the IT companies.

### Histogram and P-P plot for Normality test



In figure-1, shows a histogram with normal overlay of the distribution of the residuals. Normal P-P plot, the distribution is considered to be normal to the extent that the plotted points match the diagonal line.

**Table: 10. Result Summary**

S. No.	Variables	Sig. (P value)	Remark
1	Training	0.002	Rejected
2	Development	0.000	Rejected

### Suggestion

The present study proposes a model of the impact of employee training and development on organizational productivity of the IT companies. The study found that training and developments are impacting significantly the organizational productivity of the IT companies. Therefore, IT people should focus on the above factors to provide enrich employee training and development.

### Conclusion

The study investigated the impact of employee training and development on organizational productivity of the IT companies, concluded that employee training and developments are impacting significantly the organizational productivity of the IT companies.

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