
**IMPACT OF LEARNING AND DEVELOPMENT ON THE ENHANCED EFFICIENCY
OF THE EMPLOYEES IN THE INFORMATION TECHNOLOGY SECTOR**

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Abstract

The success and failure of every organization depend on the quality and efficiency of the human resources. Well-trained employees will be advanced in skills, knowledge, and competency and will be considered the cornerstone for success. Hence the purpose of this study is to investigate the relationship between learning and development and employee efficiency among IT professionals. A descriptive research method is applied in this study using 952 questionnaires distributed among IT employees. The collected data were carefully analyzed using the SPSS version

25. The statistical tools used include frequency tables, percentages, means, and standard deviations, and inferential statistics like KMO and Bartlett's test, SEM, and Regression were used to determine whether there is a significant relationship between learning and development and the variables. The analysis and interpretations were done at a 0.05 level of significance. The study concluded that learning and development have an impact on the enhanced efficiency of the employee.

Key Words: Learning and Development, Employee Efficiency, Skills and knowledge.

Introduction

In the present competitive era, the survival of every IT organization depends upon the efficiency of human resources. The more innovative, creative, and inventive the employees are, the more will be the results in enhancing the efficiency of the organization. Learning and development are one of the significant factors of Human Resource Management that helps the employees in improving their knowledge, skills, ability, satisfaction, competency, and overall efficiency. Learning and Development play a vital role in organizational effectiveness. Employees are updated with the most modern techniques and technological advancements as they are valued by the organization. Human Resources are an indispensable asset and a key factor for gaining a competitive advantage

especially for IT organizations and learning becomes the most essential tool for its actualization. Through L&D employees' capabilities, expertise, and commitment increase and that influences the organization in preserving and upgrading the obtained positions in the IT industry. Organizations must consider the effort, cost, and time utilized for learning and development programs as an investment rather than a cost.

Significance of the study

Learning and Development become indispensable the moment when an organization realizes the need for further expansion and improvement. The HR professionals along with the managers and leaders align the learning and development strategies in connection with the organizational goals that can contribute to the smooth functioning of the organization. Therefore, understanding the HR activities, especially learning and development enables the managers to help the employees enhance their skills and abilities and perform better and keep them motivated. This will strengthen the individual and organizational efficiency and meets the goals and standards despite the unforeseen changes and challenges. This study becomes important because many IT organizations are striving for organizational efficacy which can only be achieved through enhancing the employee's skills, knowledge, abilities, competency, etc. through effective learning and development designs. However, the results of the study will help the management to identify the challenging areas where improvements need to be done through learning and development for increasing the efficiency of the employees.

Review of Literature

i) Learning and Development

The current business enterprises have no other option before them than to become an organization that learns. Learning is the only way through which development and survival are assured. Stop learning is considered as stop living. Therefore, the expansion and survival of organizations depend upon effective learning and development (Handy, 1995). It is a necessary factor not only for the employees but also for the organization for running the daily corporate races (Blickstein, 1996). The amount spent on L&D is considered an investment only when the desired outcome results in fulfilling the purpose of enhancing employees' skills, knowledge, and performance (ML Hall, S Nania, 1997). The effectiveness of learning and development activities depends on the effective design and delivery and the methods of learning used thereof (RAG Khan et, al, 2011). Identifying the learning needs is one of the significant factors that lead to effective L&D methods that need to be implemented (Gabrieline, 2006). The learning program will be good only when the Training Need Assessment (TNA) is properly handled or else it will go in vain. TNA is necessary for accomplishing the organizational objectives and connecting the gap between the required skills and the existing skills of the employees for higher efficiency (J Brown,2002).

ii) Trends and techniques in learning

Learning and development activities become highly effective when employees are taught according to the recent trends and technological methods and techniques (G. Kaupins, 1997). For the effective operation of an organization, employees must have the capacity to handle the seeming contradictions. It requires both psychological as well as technological know-how. Therefore, organizational learning must remain at the forefront with the focus on providing learning and development according to the recent trends and techniques to respond to the uncertainty (Magretta, 2002). The need for L&D is to update and upskill the employees with the latest technical and technological developments. Even though the employees are good enough at performing their job, they need more knowledge and skills to appraise themselves to be more efficient (GV Narasimhan & CS Ramanarayanan, 2014).

iii) L&D leading to efficiency and productivity

Every organization expects outstanding performance from employees and this need is fulfilled through constant learning and development. Effective training leads to improved efficiency of the employee resulting in increased productivity (Huang, 2001). There is a strong correlation between the L&D activities and an enhanced level of efficiency with an increase in productivity (Sieburn Thomas, 2005). The effectiveness of L&D reflecting in the efficiency of the employee depends upon the employee's level of participation in the learning activities ((AA Ramli et.al, 2018). L&D allows the management to arrange a favorable climate that brings engagement and efficiency to the employees. Joyful and engaged employees are more likely to be committed, efficient, and productive (Kinicki and Kreitner, 2007). L&D enhances team spirit, and inter-team collaborations and improves teamwork which will automatically reflect in high productivity (Atul Mathur and Agarwal, 2013). It is positively related to organizational commitment, enhanced performance, and more efficiency with an increase in productivity. The rewards offered to the topmost performers after assessment also has an impact on the efficacy and productivity (Guna et al. 2013).

iv) Learning feedback, suggestions, and evaluation

The evaluation and feedback after the learning and development curriculum have to be evaluated. Lack of evaluation of learning outcomes and employee performance leads to inefficiency in employees and the organization. Suggestions and feedback from employees immediately after the learning activities are highly essential for the organization and employees' efficiency (Elbadri, 2001). The success of every learning course is linked to the methods and techniques used, the acquired skills and expertise in the job, and the assessment standards used in evaluating the same (Arthur and Bennett, 2003). Every organization needs to note that the L&D needs have to be identified first to select the right methods and techniques to be included in learning programs before they are implemented, and evaluating the outcome is also crucial to know the impact of the learning provided (McCourt, W., Derek, E, 2003).

v) Learning and Development resulting in skills acquisition and job satisfaction

An organization's effectiveness and performance depend upon the skilled workforce. Therefore, companies invest and focus on implementing effective learning and development programs for organizational effectiveness (M Mayfield, 2011). The more the employees are trained with updated knowledge and continuous learning, the less will be their level of dissatisfaction (Spears et al. 2002). L&D promotes professional creative thinking and enhances skills and perceptions with satisfaction in the job the employees deal with (Birdi, 2005). The unskilled workforce is transformed into the most versatile who become capable of discharging their duties and responsibilities with efficiency and job satisfaction (Ameeq and Hanif, 2013). L&D can be addressed as a technique that transfers newer knowledge, skills, and competence to improve their performance in current and future assignments (Katou, A., Budhwar, 2006).

Research Objectives

- To measure the effectiveness of learning and development in enhancing employees' efficiency.
- To examine the role of learning and development in improving knowledge, skills, and competency in employees.
- To investigate whether learning and development help employees face the challenges and unforeseen changes in the workplace.
- To find out the value of employees in organizations and the role played by learning and development in bringing job satisfaction and efficiency through advanced skills resulting in productivity.
- To examine the importance of evaluation and feedback on learning and development.

Hypothesis

H1. There is a significant relationship between L&D and employee efficiency and productivity.

H2. There is a significant relationship between L&D and employees' job satisfaction and performance.

H3. There is a significant relationship between L&D and improving the skills and knowledge and competency of the employee.

H4. There is a significant relationship between L&D and awareness of trends and technologies in work.

H5. There is a significant relationship between L&D and investment for further advancement.

H6. There is a significant relationship between L&D and employee evaluation and feedback.

H7. There is a significant relationship between L&D and employees' ability to face challenges and unforeseen changes.

H8. There is a significant relationship between L&D and organizations valuing employees.

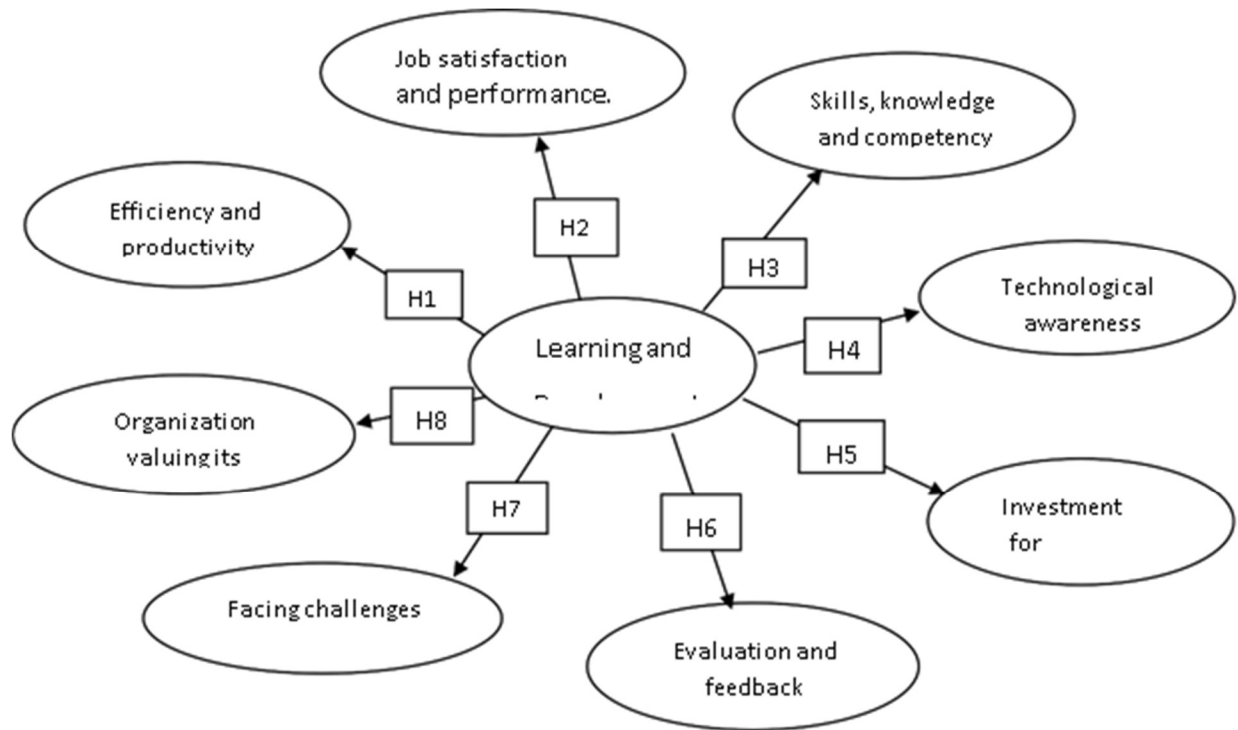


Fig 1: Employee attributes acquired through effective L&D

Research Methodology

The research design chosen for this study is descriptive. The universe of the study refers to the employees working in IT companies in Thiruvananthapuram city. The data for the study were collected by the means of a well-structured questionnaire. The effectiveness of learning and development in employees' efficiency was measured using a 14-item instrument which was categorized into two sections A and B. Section A consisted of 5 items to gather the information related to the biodata of the respondents like age, sex, educational qualification, years of experience, and income. Section B consisted of 8 items related to the constructs of the subject matter. Five points Likert scale was used (Strongly Agree-5, Agree-4, Neutral-3, Disagree-2, Strongly Disagree- 1) for responding. 1,500 questionnaires were distributed among which 1,100 returned. Only 952 questionnaires were valid for the study. The present work is expected to be added to the existing studies on the impact of learning and development in enhancing employee efficiency.

Analysis and Interpretation

Table1: Classification based on demography

Personal Factors		Frequency	Percentage
Age	18 -25 years	207	21.7
	25 -30 years	312	32.8
	30 - 35 years	149	15.7
	Above 35 years	284	29.8
Gender	Male	511	53.7
	Female	441	46.3
Educational Qualification	Bachelor Degree	426	44.7
	Master's Degree	380	39.9
	Professional Degree	122	12.8
	Others	24	2.5
Years of Experience	1 -5 Years	426	44.7
	6 -10 Years	227	23.8
	11 -20 Years	236	24.8
	Above 20 Years	63	6.6
Income	Less than Rs.30,000	220	23.1
	Rs.31,000 - Rs.60,000	274	28.8
	Rs.61,000 - Rs.90,000	172	18.1

The above table shows that 207 (21.7 %) of the employees belong to the age group of 18-25 years, 312 (32.8%) belong to 25- 30 years, 149 (15.7%) belong to 30-35 years, and 284 (29.8%) belong to the age group above 35 years. 511(53.7%) of the respondents are male and 441 (46.3%) are female. 426 (44.7%) of the respondents have a Bachelor's Degree as their educational qualification, 380 (39.9%) have a Master's Degree, 122 (12.8%) have Professional Degree, and 24 (2.5%) have other qualifications. 426 (44.7%) of respondents have up to 5 years of experience, 227 (23.8%) have up to 10 years, 236 (24.8%) have 11-20 years, and 63 (6.6%) have above 20 years of experience. 220 (23.1%) of the respondents have less than 30,000 as their monthly income, 274 (28.8%) have 31,000- 60,000, 172 (18.1%) have 61,000-90,000, and 286 (30%) have more than 90,000 as their monthly salary.

Table 2: Classification based on the subject matter

Descriptive Statistics					
Item	Description	N	Mean	Std. Deviation	Ranking
1.	My organization values me and the work I do.	952	4.30	.706	1
2.	I am well prepared for the expected and unforeseen changes and challenges in my workplace.	952	4.02	.793	5
3.	I appreciate the interest my organization shows in the feedback and the suggestions I give.	952	4.03	.841	4
4.	My organization invests time and money for achieving the organizational goals and further advancement.	952	4.25	.771	2
5.	I am well aware of the most modern trends and techniques in my work and make the best use of them.	952	4.00	.828	6
6.	My organization identifies the needs related to skills, knowledge, abilities, competency, and behavior regarding the job.	952	4.13	.812	3
7.	I am not quite satisfied with my performance at work.	952	2.78	1.204	8
8.	My skills and knowledge are well updated and it increases my efficiency and productivity.	952	3.90	.842	7

Table 2 explains the total number of respondents, and the mean and standard deviation of the employee attributes of learning and development. Based on the mean score the items are ranked. The result of the table depicts that the score of the mean related to item 1 is as high as 4.30 and hence it is ranked first. Followed by item 4 with a mean value of 4.25 is ranked second, item 6 with a mean score of 4.13 is ranked third, item 3 with a mean value of 4.03 is ranked fourth, item 2 with a mean score of 4.02 is ranked fifth, item 5 with mean value of 4.00 is ranked sixth, item 8 with a mean value of 3.90 is ranked seventh and item 7 with a mean score of 2.78 is ranked as the last, eighth.

About the application of learning and development related to employee efficiency, organizations valuing employees as assets is found to be an area where L&D finds optimum advantage. Similarly, L&D is widely used in identifying the needs related to skills, knowledge, competency, and abilities regarding the job. The study also reveals that L&D has not been an advantage to a certain level in improving the performance and satisfaction in the work done by the employees.

Table 3: KMO and Bartlett’s Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.858
Bartlett's Test of Sphericity	Approx. Chi-Square	2570.725
	df	28
	Sig.	.000

Table 3 displays KMO and Bartlett’s Test. The KMO ranges from 0 to 1, with the higher values indicating higher suitability. Preferably this value is to be more than 0.7. Regarding learning and development, the KMO measure of sampling adequacy is 0.858, and Bartlett’s test of sphericity is significant (2570.7).

Table 4: Eigenvalues for learning and development

Item	Initial Eigenvalues		
	Total	Percentage of Variance	Cumulative %
1	3.739	46.739	46.739
2	1.009	12.614	59.353
3	.938	11.727	71.080
4	.652	8.144	79.225
5	.506	6.324	85.548
6	.411	5.140	90.688
7	.395	4.934	95.622
8	.350	4.378	100.000

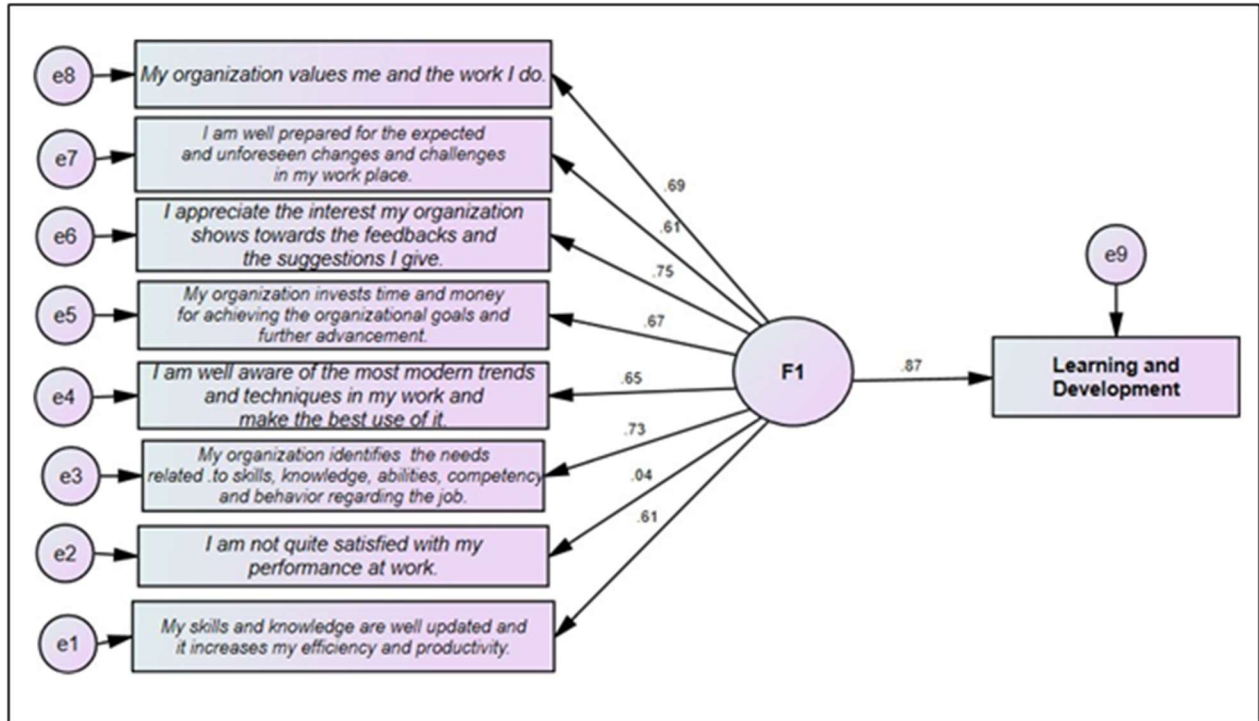
The results of Eigenvalues are demonstrated immediately preceding the factor analysis. Here, three components cumulatively account for 71.08% of the total variance in learning and development and are discussed in the coming table ahead.

Table 5: Factor Analysis

Rotated Factor Matrix				
N	Description	Factor		
		1	2	3
1	My organization invests time and money for achieving the organizational goals and further advancement.	.794		
2	My organization values me and the work I do.	.782		
3	I appreciate the interest my organization shows in the feedback and the suggestions I give	.779		
4	My organization identifies the needs related to skills, knowledge, abilities, competency, and behavior regarding the job.	.718		
5	My skills and knowledge are well updated and it increases my efficiency and productivity.		.826	
6	I am well aware of the most modern trends and techniques in my work and make the best use of them		.819	
7	I am well prepared for the expected and unforeseen changes and challenges in my workplace.		.678	
8	I am not quite satisfied with my performance at work.			.995

Factor analysis is used to recognize a smaller number of factors that comes under a larger number of observed variables. The correlations between the factor and the variable with values ranging from -1 to +1 are shown as rotated factor loadings in Table 5. For an optimum factor solution, the particular variable must load high on one factor and low on all the other factors in the rotated factor matrix (Ajai and Sanjaya,2006). In Table 5, all the 8 items show more than 0.50 as factor loadings.

Structural Equation Modelling (SEM)



SEM is used to assess the relationship between variables and also to verify the compatibility of the used model (Peter, 2011). For evaluation, emphasis is given to Chi-square, CFI, GFI, AGFI, TLI, IFI, RMSEA, and PGFI which are shown in the Goodness Fit model in Table: 6. According to Gerbing and Anderson (1992), the criteria for accepting the model are as follows: RMSEA should be 0.08 or lower, CFI 0.09 or higher, and NFI 0.09 or higher. The fitness of the data and the measurement model are tested with the goodness-to-fit (GFI) test where greater than or equal to 0.9 shows a good fit (Hu and Bentler, 1999).

Table: 6- GOODNESS OF FIT TEST FOR STRUCTURAL EQUATION MODELLING (SEM)

Model	Normed chi-Square (χ^2/df)	GFI	AGFI	CFI	NFI	RMSEA
Study model	3.27	.902	.837	.889	.883	.068
Recommended model	Less than 5	> 0.90	> 0.90	> 0.90	> 0.90	< 0.1

Table 6 shows the result of the Goodness of Fit Test for SEM. GFI is 0.90 which is equal to the recommended value. The other values are nearer to the level of satisfaction. AGFI is 0.837, CFI is 0.889, NFI is 0.883 and RMSEA is 0.068. Therefore, it is indicated that L&D enhances the efficiency of employees up to a certain level.

Table 7: Regression Analysis

Description			Estimate	S.E.	C.R.	P
My skills and knowledge are well updated and it increases my efficiency and productivity.	<---	F1	1.000			
I am not quite satisfied with my performance at work.	<---	F1	.887	.060	16.085	***
My organization identifies the needs related to skills, knowledge, abilities, competency, and behavior regarding the job.	<---	F1	1.151	.063	18.185	***
I am well aware of the most modern trends and techniques in my work and make the best use of them.	<---	F1	1.048	.063	16.723	***
My organization invests time and money for achieving the organizational goals and further advancement.	<---	F1	1.002	.059	17.061	***
I appreciate the interest my organization shows in the feedback and the suggestions I give.	<---	F1	1.233	.066	18.623	***
I am well prepared for the expected and unforeseen changes and challenges in my workplace.	<---	F1	.947	.059	15.986	***
My organization values me and the work I do.	<---	F1	.943	.054	17.416	***
Q8_ave	<---	F1	.940	.046	20.453	***

Table 7 depicts the unstandardized coefficients and their related test statistics. The amount of variation in the mediating or dependent variable for each unit change predicting is symbolized by unstandardized regression values. In the table, the standard error as well as the estimate attributed by the standard error. P column is associated with the hypothesis and its acceptance.

Table 8: Standardized Regression Weights

			Estimate
My skills and knowledge are well updated and it increases my efficiency and productivity.	<---	F1	.612
I am not quite satisfied with my performance at work.	<---	F1	.037
My organization identifies the needs related to skills, knowledge, abilities, competency, and behavior regarding the job.	<---	F1	.730
I am well aware of the most modern trends and techniques in my work and make the best use of them.	<---	F1	.652
My organization invests time and money for achieving the organizational goals and further advancement.	<---	F1	.669
I appreciate the interest my organization shows in the feedback and the suggestions I give.	<---	F1	.755
I am well prepared for the expected and unforeseen changes and challenges in my workplace.	<---	F1	.615

			Estimate
My organization values me and the work I do.	<---	F1	.688
Q8 ave	<---	F1	.874

Table 8 reports according to the SEM analysis that, collecting feedback and suggestions from employees is the main factor that helps in enhancing the efficiency of employees followed by acquiring skills, knowledge, and competency through L&D, organization valuing their employees, proper investments for advancement and so on.

Conclusion

The objective of the study is to identify the impact of learning and development in enhancing employee efficiency. For this purpose, the collected data were analyzed. It is observed that collecting employee feedback and suggestions regarding L&D, enhancing skills, knowledge, abilities, competency, and behavior regarding the job, and their improved satisfaction leading to enhanced performance were found to be the major contributors to the efficiency of employees. Followed by organizations valuing employees as their assets, spending adequate investment for advancement and achieving organizational goals also enriches employee efficiency. It was found that providing learning in the most modern techniques and technologies in work, and helping employees to be well prepared for unforeseen changes and challenges must be given more importance by the organizations for increasing productivity through enhanced efficiency. The findings can help the IT organizations in building and consolidating their focus on new L&D programs that can improve employee efficiency.

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