

Influence Of HR Analytics On Training And Development Skills In IT Sector: A Case Study In Kerala

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Abstract

Purpose: This paper intends to explore the influence of Human Resource (HR) analytics on the training and development skills in the Information technology (IT) sector concerning Kerala in India. Furthermore, this paper investigates the approaches and practices followed by the HR officials and the IT professionals in the organization. Also, this paper explains how HR analytics can be applied in IT sectors for the betterment of the skills of IT professionals.

Design/Methodology/Approach: This paper presents a quantitative study by considering the sample of 213 expertise, qualified, and knowledgeable employees in the IT sector and HR people of Kerala. The hypotheses were verified using Cronbach's Alpha reliability test, and Bivariate Correlation.

Findings: From the findings, it is understandable that the HR analytical practices achieve a straight and positive influence on the performance of IT employees through practicing training and development skills.

Research Limitations/Implications: As for scholars and experts, this study points toward the practices of HR analytics that help to enhance employee skills through training strategy.

Originality/Value: The paper plans perceptions on training, and development practices followed by HR analytics and professionals. Also, it delivers HR analytics that can cope with the development and retention of IT employees.

Keywords: Training Strategy, HR Analytics, Employees' Skills Development, IT Sector, HR Professionals

Introduction

Measuring the efficacy of a training program for an IT organization is an important part of the training process. The best method to optimize the Return on Investment (ROI) and assess the genuine worth of staff training programs is to use learning analytics. It's no secret that in today's economy, investing in staff training and development programs has become critical [1]. Employee training programs that increase employee retention, productivity, loyalty, and skill level have been shown to generate a good ROI. Profit margins have increased by as much as 24 percent for companies that engage in quality training [2]. Nevertheless, not all staff training initiatives are productive or have a significant enough influence to be worthwhile. In reality, 45 percent of employee training efforts were determined to be useless.

Every executive, manager, and training professional's worst fear has come true [3][4][5]. The fact of the matter is that learning analytics can now be used to assess the performance and ROI of an organization's employee training activities. Learning and Development analytics is a subset of people analytics, which employs predictive and prescriptive analytics, as well as machine learning, to aid in the prediction and decision-making process [6][7].

This method can also aid in the creation of tailored learning experiences as well as the improvement of understanding and subject matter retention. Implementing a Learning and Development analytics approach to employee training may assist an IT organization in creating a learning culture, which can benefit the company in two ways: higher employee

engagement and better business decision-making [8][9]. Simply put, employees are less likely to leave if they believe their employers support their long-term professional ambitions. In fact, 70 percent of workers now mention chances for job-related training and development as a factor for staying at a job. This figure rises to 87 percent among millennials, who, it should be remembered, now account for the majority of the workforce. Employee retention is a major goal for most businesses [10]. Employee retention can be aided through learning and development because "workers who believe their employers foster professional growth are more confident in their long-term career path." People who stay with an organization are 24 percent more likely to say they have had access to the learning and development they require, according to a survey [11][12].

HR Analytics may provide information about how Learning and Development affect employee retention, such as which training programs create the longest-tenured cohorts and if the cost savings from lower turnover justify the investment in critical programs. IT companies may use this data to identify which levers to pull in order to enhance staff retention even more, depending on the programs that the data has proven to be the most successful [13]. As a result, you'll need data from across the employee lifetime to analyze the effectiveness of Learning & Development. HR Analytics may be utilized to obtain a full picture of an employee's learning during their time with your organization [14]. This is only achievable if you have an analytics solution that can integrate all of your HR and business systems - whether it's your performance management, human resource management, or financial performance management tool [15][16][17]. Examine the correlations in this data over periods ranging from months to years. This one source of data truth allows you to measure the ratio of high-performers to non-high performers who participate in training, how long it takes for performance to improve after training, if training and certification programs increase financial performance, and more [18][19].

Employee engagement may be investigated using analytics within locations, departments, and teams to see if those who are highly engaged are also those who have just

finished a professional development program [20]. Similarly, learning data may tell which groups have the lowest levels of engagement, what variables may be leading to this low score, and whether more training could help. Because roles are growing more specialised, a "one-size-fits-all" approach will not work for the entire IT sector [21]. Role-centric methods (i.e., role-specific, customised approaches to learning design and delivery) are "Very Valuable" or "Extremely Valuable," according to 68 percent of Learning and Development providers. Examine the common characteristics of IT employees who have never received training to understand how this affects performance and whether a new Learning and Development programme for this group is necessary [22][23].

Literature Review

According to a previous study, the size of an IT company has a significant influence on HR analytics adoption. The capacity of larger firms to access the tools, resources, and data needed to use HR analytics is the most important component in this scenario. [24][25][26]. Many new and small organisations lack the necessary resources to facilitate HR analytics implementation in the IT sector. [27][28] attributed the failure of new, particularly smaller firms, to implement HR analytics to a lack of prior exposure or awareness of the analytics, as well as the inclination of IT organisations to be content with just quantitative data, such as sales and profit.

The research in [22] is based on one of Lebanon's private sector case studies. HR professionals rely on HR analytics to establish employee development plans, according to the authors of this study. They also recommend that businesses incorporate HR professionals and HR analytics into the decision-making and development strategy formulation processes.

According to the author of this study in [29], training and development improve not only employee productivity but also the productivity of the company. According to this study, training has improved employee initiative and quality of work, and firms should train and develop their personnel to the utmost extent possible in order to increase productivity.

According to the report in [31], training and development is a Human Resource

Management (HRM) need that promotes performance at the individual, collegial, and organisational levels by facilitating the acquisition of knowledge. Moreover, the authors stated that training and development also have a good association with employee performance and productivity.

From the literature, the following null hypotheses (H₀) and alternative hypotheses (H_a) have been developed.

H₁₀: There is no significant influence among HR analytics practices in IT businesses and the progress of employee skills

H_{1a}: There is a significant influence among HR analytics practices in IT businesses and the progress of employee skills

H₂₀: There is no significant influence among HR analytics practices in IT businesses and the retention of employees

H_{2a}: There is a significant influence among HR analytics practices in IT businesses and the retention of employees

H₃: Training and development in the IT sector have a significant influence on decision-making and skills improvement.

H₄: HR analytical practices are significantly related to IT employees' skills development and productivity.

H₅: Organization development has a significant influence on the quality of work-life of IT professionals.

Objectives

The study looked at the influence of training and development on the competencies of IT employees. This study examines training and development as an HR analytics practice, as well as its impact on employee performance in the IT industry. The following objectives have been analyzed in this research work.

- To inspect the factors that influence IT employee performance in terms of training and development
- The influence of training and development on the decision-making skills of IT employee

- Employee contentment and the impact of training.
- To examine the need for staff training in the IT industry.
- Determine the impact of training on staff productivity and performance.
- Determine the effect of development on staff productivity and performance.

Research Questions

The research questions given below show the purpose of the research work.

- 1) Why HR analytics is important in training the staff and enhancing employees' performance or productivity of employees?
- 2) What is the impact of HR analytics in staff training and development in IT employees' decision-making?
- 3) What is the relationship between the retention of IT employees and training and development offered by HR professionals?
- 4) What are the most significant approaches in training and development that have a positive influence on employees' satisfaction and retention?

Methodology

Perception on Training

Many research investigations have acknowledged the necessity of training as a vital component of the IT business. The increase of competition and the relative success of firms that place a high priority on staff development has affected the acknowledgment of the relevance of training in recent years. Researchers went on to say that technological advancements, atomization, mechanization, changing environments, and organizational change have gradually led IT employers to realize that success is dependent on their employees' skills and abilities, which necessitates significant and ongoing investment in training and development. Besides, senior management teams have realised the growing relevance of training, employee development, and long-term education as a result of HRM principles such as dedication to the IT business and the expansion of the quality movement. Such ideas necessitate not only meticulous preparation but also a stronger focus on personnel development. The less likely an

employee is to have an accident on the job, and the more skilled the individual gets, the better. Employees gain skills and efficiency throughout training, increasing their chances of advancement. They grow more qualified for advancement. They become a valuable asset to their company. IT employees' efficiency and productivity growth as a result of increased productivity and training. Employees that have been properly taught perform in both quantity and quality. When personnel is effectively taught, there is a minimized wastage of time, money, and properties.

Perception on Development

The goal of HR development is to create the best staff possible so that the IT company may continue to expand. This can only be accomplished by putting in place comprehensive and systematic personnel training and development programmes for the IT employees. Employee growth in career-enhancing abilities is constantly valued, which leads to employee motivation and retention. There is no question that a well-trained and developed workforce will be a significant asset to the firm, increasing their efficiency and effectiveness in carrying out their responsibilities. Training is a learning experience that has the potential to bring about good changes and help the company achieve its goals. It enhances the employee's capacity to do the work effectively and efficiently. Development, on the other hand, refers to those learning opportunities that are intended to assist personnel in their development. The focus of development is not largely on skills. Instead, it teaches general information and attitudes that will be useful to higher-level employers. Personal motivation and desire are frequently required for growth efforts. Management development programmes, for example, include development activities that are often elective. It has been claimed that if the training and development function is to be effective in the future and deliver all projected returns, it must go beyond traditional roles and procedures. Moreover, the strategic approaches to training and development that the organisation may adopt, and suggest that the strategy chosen should be based on a study of the IT company's needs, management and staff attitudes and beliefs, and the number of

resources available. This more strategic perspective should be useful in both evaluating current efforts and preparing for the future.

Perception on Training and Development

A large body of research has shown that there is a link between training, development, and common organisational indicators including performance, productivity, competitive edge, decision-making, and effectiveness. The researchers focused more on the linkages and relationships between the ideas of training and development in the previous studies and then determined the influence of these combined concepts on performance and productivity. Training and development, according to, should be viewed not just as the thread that connects all HR activities, but also as a tool for determining and indicating when and how work practises should change. IT employees should, in other words, take on the role of organisational change agents. To be successful in this function, the HR manager must provide a framework for making HR choices that are aligned with the proper vision and strategic plan. In accordance with the foregoing, training assists an individual in learning how to execute their current work properly, which includes preparing the individual or employee for future employment and overall growth. In summary, development works hand in hand with training since HR can only reach its full potential if the learning process extends beyond the mundane. Even yet, these failure reasons can be avoided or at least minimized. A suggested collection of desired strategies and models for preventing a training program's failure can be found from the HR practises. According to the findings, IT businesses should select training and development strategies that successfully integrate into their culture. Training requirements and important business skills should be properly evaluated. Then, in order to inspire workers, close performance gaps, and achieve organisational goals successfully, proper managerial strategies, as well as complete plans or models, should be adopted for an effective training and development programme.

Perception on Performance and Productivity

Training and development are critical components of HR analytics practises, since they help individuals and especially, IT organisations accomplish their goals. Employee and organisational performance are thought to be influenced significantly by training and development. In general, the term performance refers to a wide idea that encompasses efficiency, economy, quality, consistency in conduct, and normative measurements. According to past studies, performance is defined as the completion of a specified task while meeting predefined requirements of accuracy, completeness, speed, and cost. Moreover performance is defined as the fulfillment of the employee's obligation, which free the performer from any contractual duties. Efficiency and effectiveness are important aspects of performance that may be highlighted via training and development in order to improve individual performance. These issues entail the need to enhance effectiveness and competitiveness, enhance quality and quantity of work, boost employee morale and organisational climate, incorporate modern or modified policies or regulations, confirm the organization's survivability, gain experience, knowledge, understanding, and attitudes, establish a succession plan and assure leadership continuity, avoid skill obsolescence and adapt with recent advances in technology, and use the correct technology, reduce under or over used resources, accidental losses, turnover, lateness, absenteeism, and other overhead expenses by bringing officials to a level of performance that satisfies the job's standard of performance "100% of the time." As a result, one might argue that training provides sufficient criteria for a person to perform better in a specific activity, and hence adds to firm performance. The importance of having a highly developed, intelligent, adaptable, skilled, competent, effective, and well-trained personnel is critical to an organization's performance, productivity, and success.

Perception on Decision-making and Training

To create a successful organization and business, it is critical that significant corporate executives and decision-makers engage in training and development processes. Leaders should make minor modifications to initiatives along the way, just as they should with other

organisational choices, depending on frequent measurement findings. Front-line leaders simply do not have the time to handle numerous survey items with average scores, percentile favourable scores, and benchmark scores before making any informed decisions on strengths, weaknesses, and areas where their work needs to improve. To cope with emerging technologies and ever-growing demands, IT industries investing in training employees in decision-making, teamwork, problem-solving, and interpersonal relations have a positive impact on the organization's level of growth as well as employee performance. HR analytics and Hr professionals play a critical role in handling the training and development practices so that the organizations can get continuous improvement. Employees' behavior and working abilities are influenced through training, which leads to improved performance and positive improvements. The most successful method of motivating and maintaining high-quality HRs inside a business is via training. Employee training is a method of increasing employee commitment and optimizing their potential. Training is a tool that has a significant impact on the achievement of an organization's goals and objectives. However, any organization's ultimate purpose is to create high revenue and maximize profit, and efficient and productive staff is a critical element in achieving this. As a result, the staff is only efficient and effective if it receives the necessary training and development, resulting in increased output.

Data Collection and Analysis

A questionnaire with a set of 35 questions was sent to the HR professionals in various IT companies in Kerala through e-mail. The questionnaire includes 5 different factors such as training and employee retention, development and employee experience, training and development, training and productivity, and training and decision-making. For this purpose, small-scale, medium-scale, and large-scale IT companies were included. The number of responses received is 214, which accounts for 61% of the total target of 350 HR professionals. The major goal of this research is to see how training and development affect IT employee performance and their skills in the workplace. Data on the influence of training and development on employee

performance, productivity, retention, and decision-making ability has been acquired from the selected respondents. The results of this survey, as well as the following examination of the replies, indicate that employee performance, productivity, and retention are all impacted by major areas of training and development.

Discussion on Results

The demographic details of the 214 respondents have been presented here. Table 1 shows the gender of the respondents. Table 2 displays the experience of the employee in the IT industry. Table 3 summarizes the size of the organization such as small-scale or medium-scale or large-scale industry. Table 4 represents the experience of the employee in the IT industry. Table 5 portrays the opinion of the HR professionals about the implementation and practice of HR analytics in the IT industry.

Table 1 Gender Representation

| Factor | Value | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------|--------|-----------|---------|---------------|--------------------|
| Gender | Male | 116 | 54.2 | 54.2 | 54.2 |
| | Female | 98 | 45.8 | 45.8 | 100.0 |
| Total | | 214 | 100.0 | 100.0 | |

Table 2 Experience of the Employee

| Factor | Value | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------------------------------------|---------------------|-----------|---------|---------------|--------------------|
| Experience of the Employee (in years) | Less than 01 Year | 88 | 41.11 | 41.11 | 41.11 |
| | 01 year to 05 Years | 56 | 26.15 | 26.15 | 67.26 |
| | 05 year to 10 Years | 44 | 20.6 | 20.6 | 87.86 |
| | More than 10 years | 26 | 12.14 | 12.14 | 100.0 |
| Total | | 214 | 100.0 | 100.0 | |

Table 3 Size of the Organization

| Factor | Value | Frequency | Percent | Cumulative Percent |
|--------------------------|-----------------------|-----------|---------|--------------------|
| Size of the Organization | 1 to 20 employees | 56 | 26.15 | 26.15 |
| | 21 to 99 employees | 112 | 52.36 | 78.51 |
| | 100 or more employees | 46 | 21.49 | 100.0 |

| | | | | |
|-------|--|-----|-------|--|
| Total | | 214 | 100.0 | |
|-------|--|-----|-------|--|

Table 4 HR Analytics used in the Organization

| Factor | Value | Frequency | Percent | Valid Percent | Cumulative Percent |
|--|---------------------|-----------|---------|---------------|--------------------|
| HR Analytics used in the Organization (in years) | Less than 01 Year | 34 | 15.88 | 15.88 | 15.88 |
| | 01 year to 05 Years | 58 | 27.1 | 27.1 | 42.98 |
| | 05 year to 10 Years | 51 | 23.83 | 23.83 | 66.81 |
| | More than 10 years | 71 | 33.19 | 33.19 | 100.0 |
| Total | | 214 | 100.0 | 100.0 | |

Table 5 Opinion of HR Professionals about the HR Analytics Practices used in the Organization

| Factor | Value | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|----------------------|-----------|---------|---------------|--------------------|
| Opinion of HR Professionals about the HR Analytics Practices used in the Organization | Strongly Effective | 113 | 52.83 | 52.83 | 52.83 |
| | Effective | 90 | 42.05 | 42.05 | 94.88 |
| | Neutral | 7 | 3.26 | 3.26 | 98.14 |
| | Ineffective | 2 | 0.93 | 0.93 | 99.07 |
| | Strongly Ineffective | 2 | 0.93 | 0.93 | 100.0 |
| Total | | 214 | 100.0 | 100.0 | |

Table 6 shows the results of the Bivariate correlation for confirming the hypotheses with respect to the experience of the employee,

productivity, and decision-making skills that have been enhanced using training and development practiced by the HR professionals.

Table 6 Bivariate Correlation Results

| | | Employee Experience | HR Analytics improved Productivity | HR Analytics improved Decision-Making Skills |
|---|---------------------|---------------------|------------------------------------|--|
| Employee Experience | Pearson Correlation | 1.00 | 0.97 | 0.86 |
| | Sig. (2 tailed) | | 0.000 | 0.000 |
| | N | 214 | 214 | 214 |
| HR Analytics improved Productivity | Pearson Correlation | 0.97 | 1.00 | 0.81 |
| | Sig. (2 tailed) | 0.000 | | 0.000 |
| | N | 214 | 214 | 214 |
| HR Analytics improved Decision-Making Skills | Pearson Correlation | 0.86 | 0.81 | 1.00 |
| | Sig. (2 tailed) | 0.000 | 0.000 | |
| | N | 214 | 214 | 214 |
| Correlation is significant at the 0.05 level (2-tailed) | | | | |

Table 7 shows the results of the Bivariate correlation for confirming the hypotheses concerning the size of the organization, employee retention, and employee

development that has been enhanced using training and development practiced by the HR professionals.

Table 7 Bivariate Correlation Results

| | | Size of the Organization | Employee Retention | Employee Development |
|--------------------------|---------------------|--------------------------|--------------------|----------------------|
| Size of the Organization | Pearson Correlation | 1.00 | 0.84 | 0.89 |
| | Sig. (2 tailed) | | 0.000 | 0.000 |

| | | | | |
|---|--|-------|-------|-------|
| | N | 214 | 214 | 214 |
| Employee Retention | Pearson Correlation | 0.84 | 1.00 | 0.86 |
| | Sig. (2 tailed) | 0.000 | | 0.000 |
| | N | 214 | 214 | 214 |
| Employee Development | Pearson Correlation Sig. (2 tailed) | 0.89 | 0.86 | 1.00 |
| | Sig. (2 tailed) | 0.000 | 0.000 | |
| | N | 214 | 214 | 214 |
| Correlation is significant at the 0.05 level (2-tailed) | | | | |

A value of less than 0.05 for a Sig. (2-tailed) indicates that the association is statistically significant. As a result, the influence of HR analytics on employee growth and retention is influenced by both the employee experience and size of a company, according to the correlation statistics above. This establishes the

truth of the above-mentioned hypotheses. The fact that all correlation values are positive indicates that the variables have a positive association. This means that the larger and older a company develops, the more probable it is to benefit from HR analytics in terms of staff development and retention.

Table 8 Cronbach's Alpha Reliability Test

| Number of factors | . Cronbach's Alpha |
|-------------------|--------------------|
| 5 | >0.9 |

Before collecting the final data, pre-test or pilot tests were undertaken to confirm the questionnaire's dependability. The pilot tests were done on questionnaires from IT organizations in Kerala, India who were chosen at random. The goal of the pilot testing was to find and eliminate ambiguities in the questionnaire, as well as improve its clarity. To confirm the questionnaire's dependability, the replies from the 214 respondents in these pilot testing were included in the final questionnaire design. Cronbach Alpha was used to assess the survey questionnaire's inter-variable

consistency. Cronbach Alpha is a measure of a collection of variables' internal consistency and dependability. Cronbach Alpha was found to be >0.9 in this study, as indicated in Table 8.

Findings

According to the data, HR analytics is used by the majority of significant IT sector companies in Kerala, India. According to the findings, IT firms with both more workers and fewer workers use HR analytics for employee development and training. As an employee retention strategy, larger companies used HR

analytics practices and attained considerable signs of progress. These findings contribute to the body of information about the relevance of HR analytics and may be useful in the future. IT businesses, particularly small and younger ones, should be aware of the advantages that analytics may provide.

Conclusion and limitations

Kerala is regarded as one of the most technologically advanced states in India. Yet this assessment does not transfer into large-scale activities or real outcomes. IT organizations, that do not prioritize HR analytics also experience an increase in turnover and the quality of HR decision-making. Besides, HR analytics with the help of specialized tools and trained personnel revealed improved productivity and retention of employees in the IT industry. HR analytics will improve HR effectiveness and lower attrition rates. Therefore, IT companies must switch from their goal operating model to a data-driven technique. All training and promotion plans, as well as assessments of people's skills, should be based on data analysis and specified metrics, rather than subjective judgment. There were various limitations in this study. Firstly, the sample was small and limited to one state, making it homogeneous and less suitable for extrapolation to a larger population. The study's validity and reliability were further harmed by its dependence on a self-administered e-mail questionnaire.

Future Research

In the future study, a bigger and more representative sample would improve the dependability of results and allow for a more accurate generalization of findings. Furthermore, future research can improve the research design by adding interviews, which would allow contact with study participants, strengthening the researcher's overall judgment. Thereby, future research should focus on this area in order to create data that can assist smaller organisations on how to utilize their HR for the greatest results in terms of organisational strategy and development.

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