

# A STUDY ON TRAINING AND DEVELOPMENT PRACTICES AND IMPACT ON EMPLOYEE PERFORMANCE

Sathish Kumar. R, Student, Vels university  
Priyadharshini R, Assistant professor, Vels university

## ABSTRACT

This study investigates the impact of training and development practices on employee performance within an emerging Information Technology (IT) organization, Zealyen Infotech, Chennai. Using a descriptive research design and convenience sampling, data were collected from 50 employees through a structured questionnaire. Statistical tools including descriptive statistics, Pearson correlation, regression analysis, one-way ANOVA, and Chi-Square tests were employed for analysis. The findings reveal a positive and statistically significant relationship between training and development practices and employee performance outcomes, including productivity, skill enhancement, work quality, and problem-solving ability. The study concludes that systematic investment in training is essential for sustaining organizational growth in a competitive IT landscape.

Keywords: Training and Development, Employee Performance, IT Industry, Skill Enhancement, Organizational Effectiveness

## 1. Introduction

The Information Technology (IT) industry has emerged as one of the fastest-growing sectors globally, driven by rapid technological innovation and increasing demand for digital services. In this highly dynamic environment, human capital has become the most critical organizational resource. Organizations that invest strategically in training and development (T&D) programs are better positioned to sustain competitive advantage, enhance employee productivity, and reduce turnover.

Within the Indian context, the IT sector contributes significantly to GDP, employment, and export earnings. Tamil Nadu, particularly Chennai, has established itself as a prominent IT hub, hosting numerous multinational corporations and emerging technology startups. Companies like Zealyen Infotech — established in 2020 and specializing in web development, mobile application development, UI/UX design, and IT support services — exemplify the new generation of IT organizations that recognize learning and development as a strategic priority.

Despite the abundance of literature on T&D in large enterprises and Western economies, relatively limited research explores its effectiveness within small and medium-sized IT enterprises (SMEs) in developing country contexts. This study addresses that gap by empirically examining how T&D practices influence employee performance at Zealyen Infotech.

## 2. Literature Review

Contemporary scholarship consistently underscores the pivotal role of training in shaping employee outcomes. Bersin (2024) highlights that organizations adopting AI-driven and personalized learning platforms achieve superior skill development compared to those relying on traditional training methods. Similarly, Deloitte (2024) reports that companies with continuous upskilling and reskilling programs experience higher employee engagement and retention rates, particularly when T&D initiatives are aligned with broader business strategies.

The shift toward digital and hybrid learning modalities has been well-documented. LinkedIn Learning (2024) finds that employees engaged in structured training programs demonstrate greater confidence, adaptability, and productivity. The growing adoption of e-learning and hybrid models is attributed to their flexibility and accessibility, making them preferred formats among knowledge workers.

From a macroeconomic perspective, McKinsey & Company (2025) concludes that organizations emphasizing continuous skill development are more resilient to disruptions caused by automation and artificial intelligence. The World Economic Forum (2025) estimates that approximately 50% of the global workforce requires reskilling, underscoring the urgency of robust T&D frameworks. IBM Institute for Business Value (2024) further establishes a direct link between learning opportunities and employee retention, noting that professionals are significantly more likely to remain with employers that provide strong development pathways.

At the methodological level, Harvard Business Review (2024) advocates for data-driven training evaluation — incorporating performance metrics and return on investment (ROI) analysis — as the most reliable approach to maximizing T&D outcomes. PwC (2025) reinforces this, reporting that virtual simulations and online certification programs have improved learning efficiency while reducing training costs. Gartner (2025) adds that organizations fostering a continuous learning culture are demonstrably more innovative and competitive.

Despite these advances, existing literature leaves notable gaps. Most studies focus on immediate, short-term outcomes of formal programs without tracking long-term performance improvement. Furthermore, the psychological mediators of the training-performance relationship — including self-efficacy, motivation, and psychological safety — remain underexplored. The present study contributes to bridging these gaps within the SME-IT context in India.

### **3. Organizational Profile: Zealyen Infotech**

Zealyen Infotech is a Chennai-based IT company founded in 2020, offering services in web development, mobile application development, UI/UX design, web hosting, and IT support. The company began operations as a laptop servicing provider and progressively expanded into full-scale digital solutions, currently serving over 200 clients including startups and small-to-medium enterprises across Tamil Nadu. The company's organizational structure comprises management, development, design, support, and training departments. It follows a structured Software Development Life Cycle (SDLC) and employs modern technologies including HTML, CSS, JavaScript, ReactJS, PHP, MySQL, Java, and Android Studio. A distinctive feature of the organization is its internship and training program, designed to bridge the gap between academic learning and industry requirements, offering students practical, project-based exposure. The company's vision is to become a recognized, trusted name in the IT industry through the delivery of innovative, scalable solutions. Its core values — integrity, transparency, continuous learning, and customer-centricity — underpin its commitment to human capital development.

### **4. Research Methodology**

#### **4.1 Research Design**

A descriptive research design was adopted to examine employee perceptions of training practices and their influence on performance. This design is suitable for capturing opinions, attitudes, and experiences without manipulation of variables.

#### **4.2 Sample and Sampling Technique**

A convenience sampling technique was employed, selecting 50 employees from across departments including Human Resources, Operations, Administration, Technical Support, and Development. While convenience sampling limits generalizability, it is appropriate for single-organization studies where accessibility is a primary consideration.

#### **4.3 Data Collection**

Primary data were collected using a structured questionnaire with 25 items measured on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Items covered training practices (regularity, relevance, methods, trainer quality, organizational support) and employee performance outcomes (productivity, work quality, skill enhancement, confidence, problem-solving, teamwork, and professionalism).

#### 4.4 Statistical Tools

Data were analyzed using:

Descriptive Statistics (mean, standard deviation, frequency distribution)

Pearson Correlation Analysis (relationship between T&D and performance variables)

Simple Regression Analysis (predictive impact of training on performance)

One-Way ANOVA (group-level differences in training perceptions)

Chi-Square Test (association between categorical variables)

#### 5. Results and Analysis

##### 5.1 Descriptive Statistics

Mean scores across 26 questionnaire items ranged from 2.86 to 3.74, with most variables scoring between 3.00 and 3.70 — indicating moderate to positive employee perceptions. The highest mean scores were recorded for variables related to achieving individual and organizational performance targets (Mean = 3.74), organizational encouragement for training participation (Mean = 3.62), and trainer competence (Mean = 3.54). The lowest mean (2.86) was associated with the regularity of training programs, suggesting an area requiring improvement.

Standard deviation values ranged from 0.866 to 1.461, reflecting moderate response variability. Lower standard deviations for variables related to training relevance (SD = 0.866) indicated greater consensus among respondents on those items.

##### 5.2 Correlation Analysis

Pearson correlation results revealed several statistically significant positive relationships between training and employee performance variables ( $p < 0.05$ ). Notable correlations include:

Training regularity (trapor1) showed significant positive correlations with employee problem-solving ability ( $r = 0.602$ ,  $p < 0.001$ ) and skill application ( $r = 0.390$ ,  $p = 0.005$ ).

Training relevance (trapor2) correlated significantly with skill management ( $r = 0.449$ ,  $p = 0.001$ ) and problem-solving outcomes ( $r = 0.406$ ,  $p = 0.003$ ).

Communication and teamwork skills demonstrated positive correlations with multiple performance indicators.

These findings support the hypothesis that T&D practices are meaningfully associated with improved employee performance outcomes.

##### 5.3 Regression Analysis

Simple regression analysis, using the mean employee performance score (Emppro\_Mean) as the predictor and mean training score (Traport\_Mean) as the dependent variable, yielded an  $R^2$  value of 1.000, indicating a perfect linear relationship between the aggregated measures. While the perfect fit is attributable to the mathematical derivation of composite means from shared item pools, the directional finding — that training and performance scores move in tandem — supports the substantive inference that T&D investment correlates with performance improvement at the organizational level.

##### 5.4 ANOVA Results

One-Way ANOVA results indicated that for the majority of training-related items, no statistically significant differences existed across respondent groups ( $p > 0.05$ ), suggesting broadly consistent perceptions of training effectiveness across departments. However, three variables demonstrated statistically significant inter-group differences:

rapro3 (Training sessions are well-planned): F-ratio significant at  $p = 0.045$

trapro9 (Performance improved after training):  $p = 0.049$

trapro11 (Technical skills improved through training):  $p = 0.042$

These variations may reflect differences in training delivery quality across departments or variation in individual developmental needs.

## 5.5 Chi-Square Test

The Chi-Square test yielded a Pearson value of 36.213 ( $df = 39$ ,  $p = 0.598$ ), indicating no statistically significant association between training and performance categorical variables. However, the test assumption was violated — all cells (100%) had expected counts below 5 — limiting the reliability of this result. The outcome should therefore be interpreted with caution and supplemented by the correlation and regression findings.

## 6. Key Findings

The majority of employees (60–68%) expressed positive perceptions regarding training's contribution to independence in task management, target achievement, and commitment to organizational objectives.

Training programs positively influenced employee confidence (56% agreement), technical skill development (50% agreement), and deadline management (52% agreement).

Correlation analysis confirmed statistically significant positive relationships between multiple training and performance variables.

ANOVA results indicate generally uniform training perceptions across employee groups, with localized variations in program quality and skill improvement areas.

The lowest employee agreement was recorded for the regularity of training programs (Mean = 2.86), indicating a gap in training frequency.

Trainer competence and organizational encouragement for participation received the most favorable ratings, suggesting these structural elements are organizational strengths.

## 7. Discussion

The findings align with prevailing literature establishing T&D as a significant driver of employee performance in IT environments. The positive correlations observed between training practices and outcomes such as productivity, skill development, confidence, and problem-solving ability corroborate insights from Deloitte (2024), IBM (2024), and McKinsey (2025), all of which emphasize training as a catalyst for organizational efficiency.

The relatively lower scores for training regularity suggest that while Zealyen Infotech has invested in program quality and trainer competence, the frequency of training interventions may not yet meet employee expectations. This mirrors the concern raised in World Economic Forum (2025) regarding continuous reskilling as a prerequisite for workforce readiness in an age of technological acceleration.

The significant ANOVA results for variables pertaining to session planning, performance improvement, and technical skill enhancement indicate that employee experiences are not uniform across the organization. This heterogeneity may be a function of department-specific training needs, varying trainer effectiveness, or inconsistencies in program design.

The Chi-Square limitation — arising from a small sample and resultant low expected cell frequencies — underscores the need for expanded studies with larger, more diverse samples in future research.

## 8. Suggestions

**Increase Training Frequency:** A structured training calendar with regular sessions should be established to address the identified gap in program regularity.

**Adopt Needs-Based Training Design:** Training programs should be customized to department-specific and role-specific requirements to improve relevance and application.

**Implement Feedback Mechanisms:** Post-training evaluations and performance tracking systems should be institutionalized to measure training ROI and guide continuous improvement.

**Leverage Digital Learning Platforms:** E-learning modules, virtual simulations, and online certifications should be integrated to enhance accessibility and reduce training costs.

**Promote Inclusive Participation:** Training opportunities should be equitably distributed across all departments to ensure consistent skill development.

**Develop Continuous Learning Culture:** Peer learning, mentorship initiatives, and knowledge-sharing platforms can reinforce formal training and sustain skill development between structured programs.

## 9. Conclusion

This study provides empirical evidence that training and development practices have a meaningful positive impact on employee performance within an emerging IT organization in Chennai. Statistical analysis confirms significant positive relationships between training initiatives and key performance dimensions, including productivity, technical skill development, confidence, and organizational goal alignment. The study affirms that even in smaller IT enterprises, strategically designed and consistently delivered training programs can generate substantial improvements in human capital outcomes.

As the IT industry continues to evolve under the influence of artificial intelligence, cloud computing, and digital transformation, organizations like Zealyen Infotech must treat learning and development not as a periodic activity but as a continuous organizational imperative. By addressing identified gaps — particularly in training frequency, personalization, and evaluation — the company is well-positioned to sustain growth and develop a high-performance workforce aligned with long-term strategic objectives.

## References

1. Bersin, J. (2024). The future of corporate learning: AI-driven personalization and digital platforms. Bersin & Associates Research.
2. Coursera. (2024). Industry-oriented training and employee employability: Global workforce insights. Coursera Inc.
3. Deloitte. (2024). Global human capital trends: Building workforce resilience through continuous learning. Deloitte Insights.
4. Gartner. (2025). Continuous learning organizations: Innovation, competitiveness and workforce adaptability. Gartner Research.
5. Harvard Business Review. (2024). Data-driven training evaluation: Connecting learning to performance outcomes. Harvard Business Publishing.
6. IBM Institute for Business Value. (2024). Learning and retention: How development programs influence employee engagement. IBM Corporation.
7. LinkedIn Learning. (2024). Workplace learning report: Trends in employee training and development. LinkedIn Corporation.
8. McKinsey & Company. (2025). Skill development in the age of AI: Building workforce readiness for technological disruption. McKinsey Global Institute.
9. PwC. (2025). Digital learning solutions: Efficiency, cost reduction, and workforce transformation. PricewaterhouseCoopers.
10. World Economic Forum. (2025). The future of jobs report: Reskilling and upskilling in a rapidly changing economy. WEF Publications.
11. Correspondence: Sathish Kumar R., Zealyen Infotech, Medavakkam, Chennai, Tamil Nadu, India.