

# Training Methods and Their Effectiveness in Employee Learning: An Empirical Study at New Mak Technology

VIGNESHWAR T<sup>1</sup>, Ms. K. KAVITHA <sup>2</sup>

<sup>1</sup>Student, School of Management Studies, Karpagam College of Engineering, Coimbatore, Tamil Nadu, India.

<sup>2</sup>Assistant Professor, School of Management Studies, Karpagam College of Engineering, Coimbatore, Tamil Nadu, India.

\*\*\*

**Abstract** - Employee training has become a critical lever for organizational competitiveness, particularly in technology-driven firms where the half-life of technical skills is increasingly short. This study investigates the training methods employed at New Mak Technology and evaluates their effectiveness in enhancing employee learning outcomes. Using a descriptive research design, primary data were collected from 150 employees through a structured questionnaire and analyzed using percentage analysis and chi-square tests. Results reveal that 80% of employees have participated in training programs, with on-the-job training identified as both the most preferred (30%) and the most effective method (33.3%). A significant majority (70%) perceive training as improving job performance and knowledge retention. Chi-square analysis confirms a statistically significant association between gender and perceptions of training impact on job performance ( $p=.002$ ) and knowledge retention ( $p=.008$ ). Key recommendations include adopting a blended training approach, strengthening feedback mechanisms, and customizing programs by role and experience level. The findings offer actionable guidance for HR practitioners seeking to optimize training investments in technology organizations.

**Keywords:** employee training, training effectiveness, on-the-job training, e-learning, blended learning, knowledge retention, New Mak Technology.

## 1. INTRODUCTION

Training is a systematic process designed to develop knowledge, skills, and attitudes (KSAs) required for effective performance. In today's fiercely competitive business environment, training is not a discretionary expense but a strategic investment. For technology firms like New Mak Technology — an IT solutions provider

specializing in software development, artificial intelligence, and enterprise services — continuous employee development is a non-negotiable organizational imperative. The rapid evolution of technical skills means that what is state-of-the-art today may become obsolete within a few years, creating a persistent pressure on organizations to keep their workforce's competencies current and relevant.

The landscape of training methods is rich and varied, ranging from traditional classroom instruction and on-the-job training (OJT) to modern e-learning platforms, mentoring, workshops, and blended approaches. Each method carries unique advantages: OJT promotes immediate skill application in authentic work contexts; e-learning offers self-paced flexibility; workshops foster collaborative problem-solving; and blended strategies combine the complementary strengths of multiple modalities to maximize learning outcomes.

Despite significant investment in training programs, New Mak Technology lacked a systematic, data-driven understanding of which methods yield the highest return in terms of knowledge retention, skill enhancement, and employee satisfaction. This gap motivated the present study, which seeks to empirically evaluate training effectiveness from the employee perspective and provide actionable recommendations for optimizing training strategy.

## Objectives of the Study

1. To identify the training methods deployed at New Mak Technology and the contexts in which each is typically used.
2. To evaluate the effectiveness of various training methods in improving employee knowledge acquisition and skill development.

3. To examine the relationship between training methods and subsequent employee job performance.
4. To assess employee perception and satisfaction regarding training quality, delivery, and relevance.
5. To provide evidence-based recommendations for enhancing the overall training strategy at New Mak Technology.

## 2. LITERATURE REVIEW

1. Chakraborty (2022) found that multi-modal training improves performance and retention, while Kumar (2021) showed active learning methods outperform lectures in skill development.
2. Prasanna (2021) highlighted experiential training and continuous learning as key to retention and adaptability; Tharian (2020) emphasized the flexibility of digital learning, and Verma et al. (2020) supported blended learning for better confidence and performance.
3. Kumpawat et al. (2020) found mentoring enhances learning and collaboration; Chopra et al. (2020) stressed aligning training with career goals, and Vanitha et al. (2019) showed feedback and assessment improve retention.
4. Shobha C.V. (2017) showed simulation training boosts practical skills; Mulyadi et al. (2012) emphasized alignment with organizational goals, and Ansari et al. (2011) highlighted the role of psychological safety in effective learning.
5. Obeng-Tuaah (via Suprick, 2025) found blended learning most effective; Ramani & Mahesh (2023) noted a shift toward digital methods post-pandemic, and Wambura (2025) confirmed the value of coaching and job-based learning.

## 3. RESEARCH METHODOLOGY

This study adopts a descriptive research design to capture the existing status of training methods and their perceived effectiveness among employees of New Mak Technology. Descriptive research is appropriate for identifying patterns, opinions, and relationships among variables in a structured, systematic manner.

### Population and Sample:

The population comprises all employees of New Mak Technology who have participated in formal training programs. A simple random sampling technique was adopted, ensuring equal opportunity for all employees to participate. A total of 150 employees responded to the

structured questionnaire, providing an adequate base for descriptive and inferential analysis.

### Data Collection

Primary data were collected through a structured questionnaire covering demographic profile, training participation and frequency, method preferences, perceived effectiveness, satisfaction, and feedback adequacy. Secondary data were obtained from academic journals, company HR reports, and published literature on training and development.

### Tools of Analysis

- Percentage Analysis — for demographic profiling and training pattern description.
- Chi-Square Test — to examine the association between gender and training effectiveness perceptions.
- Mean Score Analysis — for ranking training factors by relative importance.

## 4. DATA ANALYSIS AND FINDINGS

### A. Demographic Profile

The sample (n=150) is predominantly in the 26–35 age group (46.7%), male (60.0%), and unmarried (56.7%). Junior employees form the largest employment category (30.0%), while graduates constitute 40.0% of the educational profile. Most respondents (36.7%) have 1–3 years of work experience, reflecting an early-to-mid-career workforce that is actively engaged in skill development and organizational learning programs.

### B. Training Participation and Frequency

A substantial 80.0% of respondents have attended at least one training program, confirming a strong training culture within New Mak Technology. Training frequency is moderate: 33.3% attend occasionally and 30.0% attend frequently. Company emails and portals serve as the primary awareness channel (30.0%), underscoring the important role of digital communication in training administration. Most employees (33.3%) allocate 6–10% of their working time to training activities, reflecting a balanced approach to work and professional development.

### C. Training Method Preferences and Effectiveness

On-the-job training is both the most preferred method (30.0%) and rated most effective for skill development (33.3%), affirming the primacy of experiential, real-context learning at New Mak Technology. E-learning ranks second in preference (23.3%), followed by

workshops (20.0%). Among the factors considered important in training, practical exposure leads (26.7%), ahead of knowledge improvement (23.3%) and scheduling flexibility (20.0%), confirming that employees value authenticity and direct relevance to their work role above all other training attributes.

#### D. Perceived Impact on Performance and Retention

A combined 70.0% of respondents agree or strongly agree that training improves job performance (36.7% agree; 33.3% strongly agree), and an equal 70.0% agree or strongly agree that training aids long-term knowledge retention (40.0% agree; 30.0% strongly agree). Digital training platforms are viewed positively by 70.0% of the sample (36.7% agree; 33.3% strongly agree), indicating broad organizational acceptance of e-learning as an effective complement to traditional methods. Overall, 73.4% of respondents feel that training programs meet their expectations, reflecting a satisfactory training ecosystem.

#### E. Satisfaction and Feedback

Trainer satisfaction is notably high: 36.7% are satisfied and 33.3% are very satisfied with trainer knowledge and instructional delivery, reinforcing the critical role of trainer quality in training outcomes. However, post-training feedback mechanisms are inconsistent — 30.0% receive feedback only sometimes and 13.3% rarely, pointing to a systemic gap in the feedback loop. Despite this limitation, 73.4% of respondents would probably or recommend the training programs to their peers, signalling strong overall endorsement of the organization's training initiatives.

#### F. Overall Training Effectiveness

36.6% of employees rate overall training effectiveness as high and 30.0% as very high — a combined 66.6% positive rating. Only 16.7% rate effectiveness as low or very low, indicating that the prevailing training ecosystem at New Mak Technology is well-regarded by the substantial majority of its workforce, and that training programs are largely achieving their intended outcomes.

### 5. SUGGESTIONS

1. **Adopt a Blended Training Strategy:** Combine on-the-job training with digital e-learning modules to leverage the complementary strengths of experiential and technology-mediated learning, ensuring both skill authenticity and accessibility.

2. **Strengthen Post-Training Feedback Mechanisms:** Implement structured, standardized feedback and evaluation processes after every training program. Consistent feedback loops improve learning consolidation and demonstrate the organization's commitment to employee growth.

3. **Customize Programs by Role and Experience Level:** Tailor training content, methods, and difficulty to specific job functions and career stages. Junior employees benefit from hands-on OJT; senior employees may require advanced workshops, leadership modules, and strategic skill development.

4. **Increase Training Frequency:** Transition from occasional, event-based training to a more regular and continuous training schedule. This supports the incremental skill development required in a rapidly evolving technology environment.

5. **Invest in Trainer Development:** Conduct periodic upskilling and certification programs for trainers to maintain high standards of instructional quality, content relevance, and innovative delivery techniques.

6. **Expand Interactive and Collaborative Formats:** Incorporate simulations, case studies, group discussions, problem-based learning, and gamified elements into training design to boost learner engagement, retention, and knowledge transfer.

7. **Implement Gender-Responsive Training Strategies:** Given the significant gender-based differences in training effectiveness perceptions, design training communication and delivery approaches that are sensitive to diverse learner needs, preferences, and motivational drivers.

8. **Establish Post-Training Performance Evaluation:** Implement a systematic post-training performance measurement framework, evaluating skill transfer and behavioral change at 30, 60, and 90-day intervals to measure training ROI and guide future program improvements.

### 6. CONCLUSIONS

This study demonstrates that training programs at New Mak Technology are widely adopted and largely effective, with on-the-job training and practical exposure consistently identified as the most impactful modalities. A substantial majority of employees (70%) perceive training as positively impacting job performance, knowledge retention, and career growth. High trainer

satisfaction scores (70%) and strong willingness to recommend programs (73.4%) collectively reflect a positive and productive learning culture within the organization.

However, inconsistent post-training feedback mechanisms and moderate training frequency represent significant gaps that limit the full realization of the organization's training potential. The chi-square analysis reveals that gender significantly moderates perceptions of training effectiveness in key dimensions, underscoring the need for inclusive, differentiated, and gender-responsive training programming.

The central conclusion of this study is that a strategically designed blended training approach — integrating the authenticity and immediacy of on-the-job training with the scalability, flexibility, and accessibility of digital learning platforms — offers the optimal pathway for maximizing employee learning outcomes at New Mak Technology. By implementing the recommendations of this study, the organization can deepen training integration into daily workflows, enhance employee engagement and satisfaction, reduce skill gaps, and ultimately strengthen its competitive positioning in the fast-paced technology and analytics sector.

## ACKNOWLEDGEMENT

The authors sincerely thank the management and staff of New Mak Technology for their cooperation and participation in this research. Heartfelt gratitude is also extended to the faculty and administration of Karpagam College of Engineering for their continuous guidance and institutional support throughout this study.

## REFERENCES

1. H. Aguinis and K. Kraiger, "Benefits of Training and Development for Individuals and Teams, Organizations, and Society", *Annual Review of Psychology*, vol. 60, no. 1, pp. 451–474, 2009.
2. E. Salas, S. I. Tannenbaum, K. Kraiger, and K. A. Smith-Jentsch, "The Science of Training and Development in Organizations", *Psychological Science in the Public Interest*, vol. 13, no. 2, pp. 74–101, 2012.
3. I. Chakraborty, "Structured Training Programs in Technology-Driven Organizations", *International Journal of Human Resource Studies*, vol. 12, no. 3, pp. 112–130, 2022.
4. S. S. Kumar, "Active vs Passive Learning Techniques in Corporate Training", *Journal of Workplace Learning*, vol. 33, no. 4, pp. 245–260, 2021.
5. R. Prasanna, "Behavioral Impact of Training on Employees", *International Journal of Training and Development*, vol. 25, no. 2, pp. 150–168, 2021.
6. K. T. Tharian, "Effectiveness of Digital Learning Platforms in Organizations", *Journal of E-Learning and Knowledge Society*, vol. 16, no. 1, pp. 65–78, 2020.
7. D. Verma, A. Singh, and P. Sharma, "Training Methods and Employee Satisfaction", *International Journal of Management Studies*, vol. 7, no. 2, pp. 89–104, 2020.
8. A. Kumpawat, R. Mehta, and S. Jain, "Mentoring and Peer-Assisted Learning in Organizations", *Journal of Organizational Behavior*, vol. 41, no. 5, pp. 420–435, 2020.
9. V. Chopra, R. Nair, and S. Gupta, "Employee Perception and Training Effectiveness", *International Journal of Business Research*, vol. 20, no. 3, pp. 134–149, 2020.
10. S. Vanitha, K. Ramesh, and P. Kumar, "Feedback and Assessment Mechanisms in Training Programs", *Journal of Training and Performance Management*, vol. 8, no. 2, pp. 77–92, 2019.
11. C. V. Shobha, "Technology-Enabled Training in Skill Development", *International Journal of Advanced Research in IT*, vol. 6, no. 1, pp. 33–48, 2017.
12. M. S. Mulyadi, A. Rahman, and S. Hidayat, "Aligning Training with Organizational Objectives and Learning Styles", *Journal of Management Development*, vol. 31, no. 6, pp. 520–534, 2012.
13. Y. Ansari, S. Khan, and R. Ahmed, "Employee Objectives and Risk Tolerance in Training Programs", *Journal of Human Resource Management*, vol. 5, no. 1, pp. 22–35, 2011.
14. P. Chandra, "Tangible Learning Outcomes in Employee Training", *Journal of Business Strategy*, vol. 34, no. 2, pp. 55–63, 2013.
15. A. A. Michis, "Long-Term Impact of Training on Skill Acquisition", *European Journal of Training and Development*, vol. 38, no. 4, pp. 310–325, 2014.
16. S. Umamaheshwari, R. Devi, and K. Kumar, "Awareness and Utilization of Training Programs", *International Journal of Management Research*, vol. 3, no. 2, pp. 44–59, 2013.
17. M. Saleh and A. Basri, "Performance-Driven Training Strategies in Technology-Driven Environments", *Journal of Organizational Learning*, vol. 18, no. 1, pp. 90–108, 2024.
18. R. Ramani and S. Mahesh, "Changing Paradigms in Training Methods: A Bibliometric

Review", *Journal of Business Research*, vol. 145, pp. 210–225, 2023.

19. J. Wambura, "Training Methods and Employee Performance Enhancement", *International Journal of Human Resource Studies*, vol. 15, no. 2, pp. 101–118, 2025.

20. M. Binmlafikh and M. Wahab, "Training and Development Imperatives: A Systematic Review", *Journal of Organizational Effectiveness*, vol. 12, no. 1, pp. 60–78, 2025.

21. T. Torrie, "Optimal Online Learning Experiences for Corporate Professionals", *Journal of Digital Learning*, vol. 9, no. 3, pp. 140–158, 2024.

22. K. Obeng-Tuaah, "Empirical Evidence on Training Effectiveness and ROI", *International Journal of Training Research*, vol. 23, no. 1, pp. 75–95, 2025.

23. A. Safar, M. Khan, and R. Ali, "Mandatory and Voluntary Training Approaches", *Journal of Organizational Performance*, vol. 14, no. 2, pp. 200–215, 2026.

24. M. Trávníčková, "Evolution of Training Methods Across European Enterprises", *European Management Journal*, vol. 42, no. 1, pp. 50–66, 2024.

25. H. Chen, R. H. L. Chiang, and V. C. Storey, "Business Intelligence and Analytics: From Big Data to Big Impact", *MIS Quarterly*, vol. 36, no. 4, pp. 1165–1188, 2012.

26. T. H. Davenport and J. G. Harris, "Competing on Analytics: The New Science of Winning", Harvard Business Review Press, pp. 1–240, 2007.

27. W. Yeoh and A. Koronios, "Critical Success Factors for Business Intelligence Systems", *Journal of Computer Information Systems*, vol. 50, no. 3, pp. 23–32, 2010.

28. A. Popovic, T. Turk, and J. Jaklic, "Towards Business Intelligence Systems Success", *Decision Support Systems*, vol. 54, no. 1, pp. 729–739, 2012.

29. B. Wixom and H. Watson, "The BI-Based Organization", *International Journal of Business Intelligence Research*, vol. 1, no. 1, pp. 13–28, 2010.

30. S. Negash, "Business Intelligence", *Communications of the Association for Information Systems*, vol. 13, no. 1, pp. 177–195, 2004.