



The impact of technology - enabled training and development on employee engagement and work performance: A study of employees in IT industry

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Abstract

The rapid adoption of digital technologies has significantly transformed employee training and development practices. The integration of digital technologies into Human Resource Management (HRM) has ushered in new era workforce management by enhancing employee engagement and work Performance. Despite its widespread adoption, empirical evidence examining the effectiveness of digital training practices and their influence on employee outcomes remains limited. The present study examines the impact of digital training and development practices on employee engagement and work performance with employee perception considered as a key influencing factor. The data are gathered from employees of IT sector and additionally in-person interviews were conducted. The selected tools such as percentage analysis, scoring technique ANOVA, and Regression are employed for analysing the primary data. The finding indicates that there is a positive correlation between employee engagement and performance. The study provides valuable insights for organizations to design effective digital training strategies that support continuous employee engagement and organizational performance.

Keywords: Technology enabled training, employee performance, employee engagement and employee perception

Introduction

Rapid technological advancement has significantly transformed employee training and development practices in modern organisations. Digital training and development have become a strategic HRM function that enables organisations to enhance employee performance and skills through technology-enabled learning platforms. The integration of digital tools such as e-learning modules, virtual classrooms and LMS has improved training accessibility, flexibility and cost efficiency (Bondarouk & Brewster, 2022).

Digital training practices play a crucial role in improving employee work efficiency, job knowledge and adaptability particularly in knowledge-intensive sectors such IT. However, the effectiveness of digital training largely depends on employee perception, including ease of use, satisfaction and engagement with digital learning systems (Vrontis *et al.*, 2021).

Despite the growing adoption of digital training initiatives, empirical studies integrating digital initiatives, empirical studies integrating digital training practices, employee perception and employee outcomes remain limited (Strohmeier, 2020) [2]. Addressing this gap, the present study examines the impact of digital training and development practices on employee performance and skill enhancement, with a focus on the role of employee perception.

Literature Review

Digital training and development have become essential strategies for enhancing employee skills and organizational performance in the digital era. Digital-based training, utilizing online learning, interactive platforms, and simulation technologies, allows employees to improve their knowledge and skills without disrupting work hours, thereby increasing competitiveness and supporting company growth (Laurentin Carolin Tiara *et al.*, 2023) [3]. E-learning offers flexibility, cost efficiency, and diverse interactive

content, making it a valuable tool for employee development; effective integration of e-learning into corporate programs can further enhance workforce capabilities (Ganieva Dilnoza Baxriddin Qizi, 2024) [4]. Digital training and development of employees involves utilizing AI-driven platforms, microlearning, and virtual training to create learner-centric ecosystems. This approach enhances accessibility, personalizes learning, and enables real-time performance tracking, though challenges like digital illiteracy and resistance to change persist. (Veena Rani K, A. M. 2025).

Objectives of the study

1. To assess employee's perception of technology enabled training and development in the companies relating IT Sector in Chennai.
2. To analyse the employee engagement of corporate employees working in IT sector in Chennai.
3. To examine the work performance of corporate employees working in IT sector in Chennai.
4. To evaluate the impact of technology-enabled training and development on employee work performance relating to IT sector in Chennai.

Research Methodology

Sample Size

Primary data was collected among 150 employees from IT sectors in Chennai city.

Data collection

Primary and secondary data were collected during the study. The respondents were employees of IT sectors. The questionnaire was drafted to collect data from employees of IT sector and simple random sampling was done.

Tools used

The data was analysed using statistical tools like percentage Analysis, Scoring Technique, ANOVA and Regression.

Analysis and Interpretation

Socio-economic profile of the respondents

The data was collected among 150 employees of IT sectors. The respondents include male and female. The majority of the respondents (70 per cent) is male employees. Among 150 employee majority of the respondents (47.0 per cent)

belongs to the age group of 26-30 years. Among 135 employee’s majority of the respondents’ literates of technical qualification (43.4 per cent). The majority of the respondents (51.2 per cent) receives an annual income of Rs.4,00,000 to 5,00,000.

Conceptual Framework Diagram

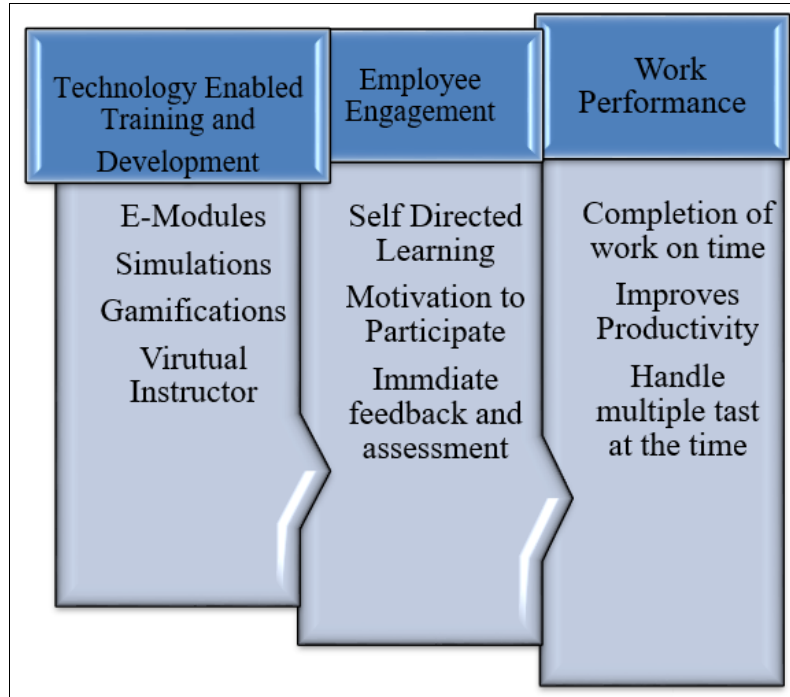


Fig 1: Digital Training and Development Practices and Employee Outcomes

Table 1: Scoring technique on employees’ perception towards Technology Enabled Training and Development Practices

| Variables | Mean | Standard Deviation | Mean Rank |
|---|------|--------------------|-----------|
| Perception towards Technology Enabled Training and Development Practices | | | |
| Simulation based training allows for different approach | 3.01 | 1.37 | 4 |
| Gamification helps to remember the concepts | 3.01 | 1.15 | 4 |
| Real time feedback | 3.24 | 1.26 | 3 |
| Personalised approach | 3.25 | 1.31 | 2 |
| Access e-modules at any time and any where | 3.42 | 1.34 | 1 |

The scoring technique adopted for analysing Technology Enabled Training and Development practices adopted by the organisation and employees’ perception towards the same and results are presented in table 1. Access e-modules at anytime and anywhere 3.42 (1.34) followed by Personalised

approach 3.25 (1.31) were occupied first two places, the employees felt that Real time feedback 3.42 (1.41) and Gamification and Simulation 3.01 (1.37) were also biggest benefits of Technology Enabled Training.

Table 2: ANOVA Results on Technology Enabled Training and Development usage with respect to Educational Qualification

| Variables | Education Qualification | | | F value | P Value |
|---|------------------------------|------------------------------|------------------------------|---------|---------|
| | UG | PG | Professional Degree | | |
| Impact of Technology Enabled Training and Development on Employee Performance | 15.62 ^a (1.88) | 19.74 ^b (1.06) | 22.91 ^c (1.21) | 186.347 | <0.001 |
| Impact of Technology Enabled Training and Development on Work Performance | 21.18 ^c (0.92) | 18.36 ^b (1.14) | 16.02 ^a (1.09) | 254.618 | <0.001 |

Note 1: The value within bracket refers to standard deviation.

2. Different alphabet among educational qualification denotes Post Hoc test results of Duncan’s Multiple Range Test (DMRT)

Since P value is less than 0.01, null hypothesis is rejected at 1% level with regard to Employee Engagement and Work

Performance associated with Technology Enabled Training and Development usage. Hence there is significant difference among different qualification level with respect to Technology Enabled Training. Based on DMRT, employees with technical qualifications reported the highest

impact on employee performance, whereas undergraduate employees exhibited higher level of work performance through technology-enabled training. The results are statistically significant at $p < 0.001$, indicating that

educational qualification significantly influences the effectiveness of technology-enabled training and development practices.

Table 3: Regression Analysis of Technology Enabled Training on Employee Performance

| Variables | Regression Co-efficient | 't' Value | P value |
|--|-------------------------|-----------|---------|
| Accessibility | 0.162 | 0.73 | <0.001 |
| Easy to Navigate | 0.149 | 0.69 | <0.001 |
| Tailored content | 0.303 | 3.946 | <0.001 |
| Interactive | 0.195 | 2.263 | 0.025 |
| Monitor the progress | 0.019 | 0.238 | 0.812 |
| Competition with peers improve performance | 0.167 | 2.658 | 0.009 |
| Constant | 7.064 | 7.160 | <0.001 |
| F static | 114.007 | | <0.001 |
| R ² | | 0.302 | |
| Adjusted R ² | | 0.091 | |
| N | | 150 | |

Conclusion of the study

The study confirms that Technology enabled training and development practices positively influence employee engagement and work performance. It also highlights that employee perception plays a crucial role in improving the effectiveness of Technology enabled training and development. Overall, the findings emphasize the importance of employee-centric digital training and personalised training strategies for achieving effective employee development.

Suggestions

The incorporation of Technology enabled Training and Development within IT sectors is imperative to enhance operational efficiency and overall productivity. Digitalization should be integrated into human resources to facilitate an accelerated training and development process and ensure impartial evaluations of personnel. Organisations should design employee-centric digital training programmes to enhance engagement and learning effectiveness. Continuous feedback and evaluation mechanisms should be included to improve quality of the training. The organisation should encourage positive training culture by providing sufficient technical support and motivation for the employees.

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