International Journal of Economic Practices and Theories (IJEPT)
ISSN: 2247-7225
Volume 2026, Issue 1

Training Programme Participation and Its Impact on Employee Productivity and Skill Enhancement: Evidence from Corporate Employees in India

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Abstract:

This study examines whether corporate employees' participation in training programmes is associated with their productivity and with the enhancement of their workplace skills. Data were collected through a structured, cross-sectional questionnaire survey of 418 corporate employees drawn from five sectors - Banking, Financial Services and Insurance (BFSI; n = 181), Fast-Moving Consumer Goods (FMCG; n = 115), Information Technology (n = 45), Real Estate (n = 46) and Pharmaceuticals (n = 31) - selected through non-probability convenience sampling. Two structural equation models (Maximum Likelihood estimation, NLMINB optimisation) were estimated to test, respectively, the path from Training Programme Participation to Employee Productivity and the path from Training Programme Participation to Skill Enhancement. Both paths were positive, large in magnitude and statistically significant (Productivity: unstandardised estimate = 0.623, β = 0.916, $z = 17.7$, $p < .001$; Skill Enhancement: unstandardised estimate = 1.16, $\beta = 1.04$, $z = 12.9$, $p < .001$). The findings indicate that training-programme participation is consistently and strongly associated with both the day-to-day productivity and the skill development of corporate employees, although the cross-sectional, self-report, convenience-sampled design means the relationship should be interpreted as a robust association rather than as proof of causation. Implications for corporate leadership, human-resource practice and future research are discussed.

Keywords: soft skills; training participation; skill enhancement; employee productivity; structural equation modelling; corporate employees

1. Introduction

Corporate organisations increasingly treat training not as a discretionary cost but as an investment expected to generate measurable returns in employee performance. Among the range of capabilities that training is designed to build, soft skills - communication, collaboration, problem-solving, emotional regulation, adaptability and related interpersonal competencies - have attracted growing research and managerial attention because, unlike narrowly technical skills, they influence how work gets done across almost every role and function (Munoz-Pena & Pulido-Reina, 2025). Human Capital Theory (Becker, 1993) provides the theoretical starting point for this study: it treats participation in training as an investment that builds productive knowledge and skill, which is in turn expected to raise an employee's output and performance.

Despite a substantial body of training-performance literature, two linked questions remain empirically under-examined in a single, multi-sector corporate sample: first, whether employees' actual participation in training programmes - as opposed to training availability alone - is associated with their measured productivity; and second, whether that same participation is associated with employees' own perceived skill enhancement. This paper addresses both questions using primary survey data from 418 employees across five corporate sectors in India, and reports the results of two structural equation models estimated to test these relationships directly.

The specific objectives addressed in this paper are: (I) to examine the impact of training programme participation on the productivity of corporate employees, and (II) to examine the impact of training programme participation on the skill enhancement of corporate employees. The corresponding hypotheses tested are H1

(training participation has a positive impact on employee productivity) and H2 (training participation has a positive impact on skill enhancement).

2. Review of Literature

The proposition that training participation improves productivity rests on transfer-of-training theory, which holds that training produces performance gains only when learned content, skills and strategies are generalised to the job and maintained over time (Baldwin & Ford, 1988). Aguinis and Kraiger (2009) synthesised decades of training-evaluation research and concluded that well-designed training benefits individuals, teams, organisations and society, provided training needs assessment, design, delivery and transfer conditions are adequately managed. Firm-level evidence broadly supports this view: Bartel (1994) found productivity gains following the implementation of employee training programmes, and Huselid (1995) showed that human-resource practices, including training, were associated with lower turnover and higher productivity and financial performance.

Soft-skills training specifically has accumulated a growing, and increasingly rigorous, evidence base. Adhvaryu, Kala and Nyshadham (2023), using a randomised field evaluation among garment-sector workers, found significant returns to productivity and earnings following soft-skills training - among the most methodologically rigorous (experimental) evidence available that soft-skills training affects output. Prada (2019) similarly reported that soft-skills training was positively associated with productivity and documented spillovers into team environments. Sartori, Costantini, Ceschi and Tommasi (2020) situated soft-skills training within the broader process of organisational change and development, while Marin-Zapata, Roman-Calderon, Robledo-Ardila and Jaramillo-Serna (2023) argued for clearer, behaviourally anchored definitions of the soft-skills construct itself - a conceptual-clarity concern that this study addresses by measuring Training Programme Participation, Skill Enhancement and Productivity as separate, operationally defined constructs rather than as one undifferentiated variable. More recently, Munoz-Pena and Pulido-Reina (2025) reviewed the developing literature linking soft skills, employee productivity and organisational performance and concluded that, although a positive association is consistently reported, studies rarely specify which soft-skill sub-dimensions drive the association or operationalise productivity consistently - a gap this study addresses through its explicit, multi-item measurement of both constructs.

On the skill-enhancement side of the model, the literature treats soft skills as trainable and developable rather than as fixed individual traits. Training interventions have been shown to support the development of soft-skill competencies that in turn reinforce job performance (Sartori et al., 2020), and situational and organisational factors - not only individual aptitude - have been shown to shape how far competencies develop following training exposure (Marin-Zapata et al., 2023). Taken together, the reviewed literature supports both the productivity hypothesis (H1) and the skill-enhancement hypothesis (H2) tested in this paper, while also indicating that most existing studies - including the present one - rely on cross-sectional, self-report, single-source data, a limitation addressed explicitly in Section 6.

3. Research Methodology

This study adopted a practice-oriented, analytical, cross-sectional survey design using a structured, self-report questionnaire (Creswell & Creswell, 2018). The sampling frame could not be constructed in advance because the study drew respondents voluntarily from several independent corporate organisations; non-probability convenience sampling was therefore used, consistent with its established role in applied organisational research where the aim is to test relationships among variables within an accessible sample rather than to generalise precisely to a defined population (Etikan, Musa, & Alkassim, 2016).

Table 1. Sample Distribution by Sector (N = 418)

Sector	N	% of sample
BFSI	181	43.3%
FMCG	115	27.5%

Information Technology	45	10.8%
Real Estate	46	11.0%
Pharmaceuticals	31	7.4%
Total	418	100.0%

Data were collected using a structured questionnaire comprising a demographic/employment-profile section and scale-based items measuring Training Programme Participation (12 items), Skill Enhancement (12 items) and Employee Productivity (measured through three sub-dimensions - task, adaptive and contextual productivity), using Likert-type response scales (Likert, 1932). Participation was voluntary and anonymous; no personally identifying information was collected (see the parent thesis, Section 3.5, for the full ethical-consent protocol).

Both hypotheses were tested using Structural Equation Modelling (Maximum Likelihood estimation, NLMINB optimisation algorithm), which is appropriate here because Training Programme Participation, Skill Enhancement and Productivity were each specified as latent constructs measured through multiple observed indicators, and SEM estimates measurement error explicitly rather than treating indicator scores as error-free. It should be noted that, at this pre-thesis analysis stage, global model-fit indices (CFI, TLI, RMSEA, SRMR, χ^2/df), a separate confirmatory factor analysis step, and a formal common-method-bias test (e.g., Harman's single-factor test) were not computed; recent methodological work indicates that such diagnostics remain informative when interpreted alongside, rather than instead of, the path-level reliability and significance evidence reported here (Saxena, Bagga, Gupta, & Kaushik, 2024; Ahmad, Alias, Hamat, & Mohamed, 2024), and their computation is carried forward as a required step before final submission.

4. Results

4.1 Hypothesis 1: Training Programme Participation and Employee Productivity

The structural equation model relating Training Programme Participation to Employee Productivity was estimated on 418 observations. The structural path was positive, large and highly significant (Table 2): a one-unit increase in training participation was associated with a 0.623-unit increase in productivity (SE = 0.0352, 95% CI [0.554, 0.692]), with a standardised coefficient of 0.916 ($z = 17.7$, $p < .001$), indicating a very strong effect in standardised terms. All twelve observed indicators of Training Programme Participation loaded significantly and positively onto the latent construct (standardised loadings 0.463-0.818), as did the three productivity indicators - task productivity ($\beta = 0.836$), adaptive productivity ($\beta = 0.882$) and contextual productivity ($\beta = 0.854$) - supporting the measurement adequacy of both constructs. H1 (training participation positively impacts employee productivity) is therefore supported.

Table 2. SEM Parameter Estimates for H1 and H2

Path	**Estimate**	**SE**	**95% CI**	**β**	**z**	**p**
Training Participation -> Productivity	0.623	0.0352	[0.554, 0.692]	0.916	17.7	< .001
Training Participation -> Skill Enhancement	1.16	0.0903	[0.986, 1.34]	1.04	12.9	< .001

4.2 Hypothesis 2: Training Programme Participation and Skill Enhancement

The second model, relating Training Programme Participation to Skill Enhancement, also produced a positive and highly significant structural path (Table 2): the unstandardised estimate of 1.16 (SE = 0.0903, 95% CI [0.986, 1.34]) indicates that a one-unit increase in training participation is associated with slightly more than a one-unit increase in reported skill enhancement, and the standardised coefficient ($\beta = 1.04$, $z = 12.9$, $p < .001$)

indicates an exceptionally strong effect in standardised terms. All twelve indicators of both the Training Programme Participation construct (standardised loadings 0.394-0.738) and the Skill Enhancement construct (standardised loadings 0.266-0.719) loaded significantly onto their respective latent variables. H2 (training participation positively impacts skill enhancement) is therefore also supported.

Reliability analysis (Cronbach's alpha) confirmed internal consistency for the Training Programme Participation scale, the Skill Enhancement scale and the Employee Productivity scale, each meeting conventional reliability thresholds in the parent thesis (Chapter 4, Section 4.6). Taken together, both structural paths tested in this paper were positive, strong and statistically significant at $p < .001$, indicating that employees who report greater participation in training programmes also report both higher productivity and greater skill enhancement.

5. Discussion

The finding that training-programme participation is strongly and positively associated with employee productivity is consistent with - and extends - prior evidence that soft-skills training improves productivity by strengthening behavioural and interpersonal capabilities that facilitate task execution and cooperation (Adhvaryu et al., 2023; Prada, 2019). Because the present design is cross-sectional, correlational and based on non-probability convenience sampling, this association is best read as evidence consistent with training participation contributing to productivity, rather than as proof that participation causes the observed productivity gains; the experimental design used by Adhvaryu et al. (2023) remains the more decisive basis for causal inference in this literature.

The skill-enhancement finding reinforces the view, increasingly supported in recent literature, that soft skills are trainable competencies rather than fixed individual traits (Sartori et al., 2020; Marin-Zapata et al., 2023). The magnitude of the standardised path ($\beta = 1.04$) suggests that, within this sample, training participation is not merely weakly correlated with perceived skill gains but is one of the strongest measured predictors of them, which is consistent with the conceptual argument that repeated exposure to guided practice, feedback and reflective learning - the substance of participation, not merely training availability - is what drives skill development (Baldwin & Ford, 1988; Aguinis & Kraiger, 2009).

Read together, the two results support a coherent interpretation: training participation operates as a measurable channel through which employees both build new capability (skill enhancement) and convert that capability into observable work output (productivity), consistent with Human Capital Theory's account of training as an investment in productive knowledge and skill (Becker, 1993).

6. Implications for Practice

For corporate leadership, these results support treating soft-skills development as a core productivity lever rather than a discretionary HR activity, protecting training time within working hours, and reviewing participation and skill-development indicators on a fixed (quarterly/bi-annual) cycle rather than treating training as a one-off event. For human-resource and learning-and-development functions, the results support conducting role-specific training-needs assessment, designing tiered (foundation-to-advanced) learning pathways, and tracking behavioural transfer indicators - manager observation, peer feedback, on-the-job application - rather than relying on post-training satisfaction scores alone, since satisfaction does not establish whether skills were actually applied at work.

7. Limitations and Future Scope

- The design is cross-sectional and correlational; causal inference about whether training participation produces productivity and skill gains (rather than, for example, more productive or more skilled employees self-selecting into training) cannot be established from this data.
- All constructs were measured through the same self-report questionnaire at the same time, raising the possibility of common-method variance; a formal bias test (e.g., Harman's single-factor test) has not yet been computed (Saxena et al., 2024).

- The sample was drawn through non-probability convenience sampling and the five sector sub-groups are markedly uneven in size (BFSI n = 181 versus Pharmaceuticals n = 31), limiting the precision of any sector-specific generalisation.
- Global SEM fit indices (CFI, TLI, RMSEA, SRMR, χ^2/df) and a separate confirmatory factor analysis step were not computed at this stage and are recommended before final thesis submission.
- Future research should employ longitudinal or experimental designs, of the kind used by Adhvaryu et al. (2023), to test whether the training-productivity and training-skill-enhancement associations documented here hold under stronger causal identification.

8. Conclusion

This study found that corporate employees' participation in training programmes is strongly and significantly associated with both their productivity and their skill enhancement, based on structural equation modelling of survey data from 418 employees across five sectors. Both hypotheses (H1 and H2) were supported at $p < .001$, with standardised path coefficients indicating very strong effects. While the correlational, cross-sectional and single-source nature of the data means the relationships should be interpreted as robust associations rather than established causal effects, the results add consistent, multi-sector evidence to a growing literature indicating that sustained training participation - not merely training availability - is a measurable lever for both employee capability development and organisational productivity.

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