



Impact of Employee Training and Development on Organizational Performance

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Peer Review Information	Abstract
<i>Submission: 11 Jan 2017</i> <i>Revision: 27 Feb 2017</i> <i>Acceptance: 10 March 2017</i> Keywords <i>Employee Training, Employee Development, Organizational Performance, Training Transfer, Human Resource Development.</i>	Employee training and development is a central human resource practice through which organizations build job-related knowledge, skills, attitudes, adaptability, and future capabilities. This paper examines how training and development influence organizational performance by integrating evidence published up to 2019. A structured literature-based methodology is used to connect training inputs with learning, transfer to the workplace, employee performance, productivity, innovation, and firm-level outcomes. The reviewed evidence indicates that well-designed training generally improves learning and behavioral performance, but organizational benefits depend strongly on transfer conditions, managerial support, alignment with strategic needs, and evaluation. Meta-analytic evidence shows medium-to-large effects of training on learning, behavior, and results, while firm-level research links internal training with productivity, innovation, and financial performance. The synthesis further shows that training alone is insufficient: organizations obtain stronger returns when programs are needs-based, practice-oriented, supported after training, and integrated with broader human resource systems. A conceptual framework is proposed in which training and development enhance employee capability, which improves employee performance and subsequently contributes to organizational outcomes. Training transfer and managerial support act as key enabling mechanisms. The paper concludes that training and development should be treated as a strategic investment and measured at multiple levels rather than as an isolated administrative activity.

Introduction

Organizations operate in environments characterized by technological change, global competition, changing customer expectations, and continuous pressure to improve quality and productivity. These conditions make employee knowledge and capability increasingly important sources of organizational effectiveness. Training refers to planned activities intended to improve competence for present work, whereas development has a broader and longer-term orientation toward future roles, adaptability, problem solving, leadership, and career growth.

Together, training and development form a major component of human resource development and contribute to the creation of human capital.

Early training research established that effectiveness should not be judged only by whether participants liked a program. Arthur et al. (2003) showed through meta-analysis that organizational training generated meaningful effects across reaction, learning, behavioral, and results criteria. Aguinis and Kraiger (2009) subsequently reviewed evidence demonstrating

benefits for individuals, teams, organizations, and society. These findings support the view that training can improve organizational performance, but they also show that the pathway from classroom or program learning to firm results is indirect.

A critical link is the transfer of training, meaning the extent to which acquired knowledge and skills are applied and maintained in the work setting. Baldwin and Ford (1988) proposed that transfer depends on trainee characteristics, training design, and the work environment. Later meta-analytic evidence confirmed that motivation, cognitive ability, conscientiousness, support, and intervention features are associated with transfer outcomes (Blume et al., 2010). Therefore, organizations that invest in training without considering post-training application may obtain limited performance gains.

At the organizational level, training can affect productivity, innovation, service quality, employee retention, and financial outcomes. Tharenou et al. (2007) found that training was related more consistently to human-resource and organizational performance outcomes than to financial outcomes, suggesting that financial effects may take longer and depend on additional conditions. Kim and Ployhart (2014) provided longitudinal evidence that internal training contributed to productivity and profit growth across changing economic conditions. Boadu et al. (2018) also connected training and development with innovative performance in multinational subsidiaries.

By 2019, research had increasingly treated training as part of an integrated HRD architecture. Otoo (2019) showed that employee competencies provide an important mechanism linking HRD practices with organizational effectiveness in banking, while Otoo et al. (2019) reported that employee performance mediates the relationship between HRD practices and performance in the pharmaceutical industry. Thus, the central research problem is not simply whether training works, but how training is designed, transferred, supported, and translated into outcomes at multiple organizational levels.

Literature Review

Human capital theory implies that investments in employee knowledge and skill can increase productive capacity. In training research, the strongest immediate effects are typically observed in learning and job behavior. Arthur et al. (2003) reported average effects in the medium-to-large range across major training

evaluation criteria, showing that structured training can create measurable improvements. Aguinis and Kraiger (2009) concluded that benefits can occur at individual, team, organizational, and societal levels when training is appropriately designed and implemented.

Salas et al. (2012) emphasized that effective training begins before formal instruction through needs analysis, clear learning objectives, motivation, and preparation. During training, practice, feedback, error management, and appropriate delivery methods matter; after training, supervisors and organizational systems must reinforce the use of learned skills. This perspective shifts training from a one-time event to a process involving preparation, learning, transfer, and follow-up.

Baldwin and Ford (1988) established a widely used model of training transfer in which trainee characteristics, training design, and work environment influence learning, retention, generalization, and maintenance. Blume et al. (2010), reviewing 89 empirical studies, found that transfer is associated with learner and environmental factors and that effect sizes vary depending on how transfer is measured. This means that a technically strong training program may still fail to influence performance when employees return to an environment that does not support new behavior.

Saks and Burke-Smalley (2014) extended the transfer literature to firm performance. Their findings indicated that transfer of training was positively related to firm performance and mediated the relationship between training methods and performance. This is important because it directly connects micro-level learning processes with macro-level organizational outcomes.

At firm level, the evidence is positive but more complex. Tharenou et al. (2007) reviewed organizational-level studies and concluded that training is associated with human-resource outcomes and organizational performance, while financial outcomes are influenced by additional factors. Kim and Ployhart (2014), using longitudinal firm data, found that selective staffing and internal training supported productivity and profit growth. Their findings suggest that training can create productive human capital that helps organizations perform under both stable and adverse economic conditions.

Table1: Summary of Empirical Evidence on Training, Human Resource Development, and Organizational Performance

Study	Focus	Key Evidence	Implication
Arthur et al. (2003)	Training effectiveness	Medium-to-large effects across evaluation criteria	Training improves learning, behavior, and results
Tharenou et al. (2007)	Organization-level outcomes	Positive links with HR and performance outcomes	Firm outcomes require multi-level evaluation
Blume et al. (2010)	Training transfer	Transfer depends on learner and work-context factors	Post-training environment matters
Saks & Burke-Smalley (2014)	Transfer and firm performance	Transfer positively related to firm performance	Application is the bridge to results
Kim & Ployhart (2014)	Productivity and profit	Internal training supports productivity and profit growth	Training is a strategic human-capital investment
Boadu et al. (2018)	Innovative performance	Training/development linked to innovation performance	Knowledge development supports innovation
Otoo (2019)	HRD and effectiveness	Competencies mediate HRD-performance effects	Competency building is a key mechanism

Organizational performance is an aggregate outcome, while training initially changes individuals. The most defensible causal pathway therefore begins with learning and competence. Employees who acquire relevant knowledge, procedural skill, interpersonal skill, and problem-solving ability can perform tasks with greater accuracy, speed, flexibility, and quality. When these individual gains are widespread and aligned with business processes, organizations can experience better productivity, customer service, innovation, and cost control.

Otoo et al. (2019) examined HRD practices in the pharmaceutical industry and identified employee performance as a mediating mechanism between HRD practices and industry performance. Otoo (2019) similarly emphasized employee competencies in banking effectiveness. These studies support a capability-performance logic: training and development strengthen employee competence; competence supports better work performance; and accumulated employee performance contributes to organizational effectiveness.

Development activities also broaden the time horizon of organizational benefits. Leadership development, career development, mentoring, job rotation, and cross-functional learning can improve adaptability and succession capacity even when immediate productivity effects are difficult to isolate. Development is therefore particularly relevant when organizations face technological or strategic change.

Training is more likely to influence organizational performance when it is aligned with business strategy and actual performance gaps. Needs analysis should identify what employees must know or do differently and why this change matters for organizational objectives. Salas et al. (2012) argued that evidence-based training requires systematic design and follow-through rather than reliance on fashionable delivery methods.

Evaluation should also extend beyond attendance and participant reactions. A multi-level assessment can examine learning, transfer, employee performance, operational outcomes, and financial or strategic outcomes. This helps managers distinguish between a program that teaches effectively but is not applied, a program that is applied but addresses the wrong business problem, and a program that produces genuine organizational value.

- P1: Employee training and development are positively associated with employee knowledge, skills, and job-related competencies.
- P2: Employee competencies are positively associated with employee performance.
- P3: Employee performance is positively associated with organizational performance.
- P4: Training transfer mediates the relationship between training and employee performance.

- P5: Managerial and organizational support strengthen the effect of training transfer on performance.

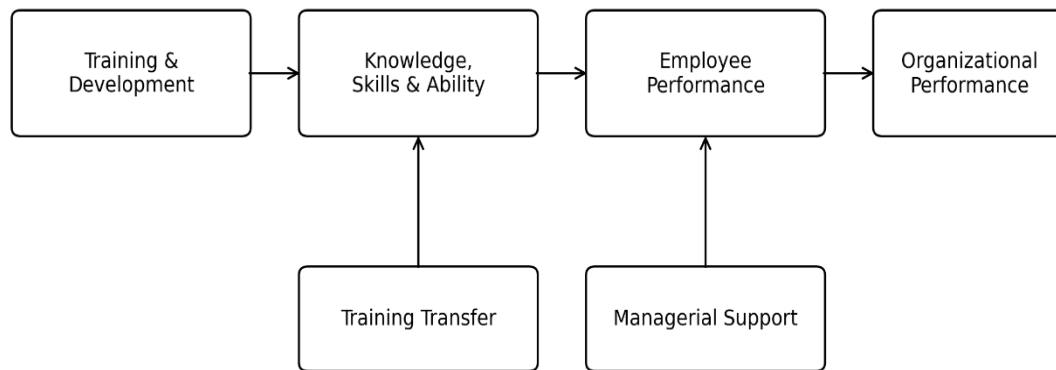


Figure 1. Conceptual framework for the impact of training and development on organizational performance.

Methodology

This paper adopts a structured literature-based methodology rather than claiming new primary survey data. The purpose is to synthesize established evidence published up to 2019 and convert it into an evaluative framework that can be used in future organizational studies. Literature was selected for direct relevance to employee training, development, training transfer, employee performance, productivity, innovation, HRD effectiveness, or firm performance. Priority was given to peer-reviewed reviews, meta-analyses, longitudinal studies, and empirical studies with identifiable DOI records.

The analytical logic follows a multi-level sequence: training and development inputs produce learning and competencies; training transfer determines whether those competencies are used at work; employee performance reflects the behavioral and productivity consequences; and organizational performance captures aggregated operational, innovation, human-resource, and financial outcomes. This sequence is consistent with the training-transfer literature and organization-level reviews.

For an empirical application of this framework, organizations may use a cross-sectional or

longitudinal design. Training and development can be measured through perceived relevance, frequency, quality, developmental opportunity, needs alignment, and access. Training transfer can be measured through use of learned skills, maintenance of behavior, supervisor support, peer support, and opportunity to perform. Employee performance may include task quality, productivity, problem solving, service quality, and adaptability. Organizational performance can be measured with operational efficiency, quality, innovation, customer outcomes, retention, and financial indicators.

Data analysis can proceed in four stages. First, internal consistency of multi-item scales can be tested using reliability coefficients. Second, descriptive statistics and correlations can establish patterns among variables. Third, multiple regression or structural equation modeling can test direct and mediated relationships. Fourth, subgroup or longitudinal analysis can examine whether effects differ by training method, job category, organizational level, or time since training. Where objective records are available, self-reported outcomes should be supplemented with productivity, quality, error, sales, innovation, retention, or financial measures.

Table 2. Recommended Variables and Indicators

Construct	Example Indicators	Data Source	Expected Relationship
Training & Development	Relevance, quality, access, developmental opportunity	Employee/HR records	Positive effect on competencies
Employee Competence	Knowledge, skill, problem solving, adaptability	Employee/supervisor	Positive effect on performance

Training Transfer	Application, maintenance, opportunity to perform	Employee/supervisor	Mediates training-performance link
Managerial Support	Feedback, coaching, reinforcement, resources	Employee	Strengthens transfer
Employee Performance	Quality, productivity, service, task effectiveness	Supervisor/objective records	Positive effect on organizational outcomes
Organizational Performance	Efficiency, innovation, retention, customer and financial outcomes	Management/records	Final dependent outcome

1. Inclusion Criteria

Included sources were published no later than 2019, focused on workplace training/development or HRD-performance mechanisms, and provided sufficient bibliographic information for verification. Sources published after 2019 were excluded from the evidence base.

Results

Evidence from 2019 further clarifies the mechanism. Otoo (2019) found that employee competencies played a mediating role between HRD practices and banking industry effectiveness. Otoo et al. (2019) reported that employee performance mediated the relationship between HRD practices and pharmaceutical-industry performance. Together, these findings support the conceptual pathway proposed in Figure 1.

Table 3. Synthesized Results

Result Dimension	Synthesis	Overall Interpretation
Learning and skill	Strong positive evidence across meta-analytic research	Training reliably improves immediate human-capital outcomes
Behavior and transfer	Positive but dependent on motivation, design, support, and opportunity	Transfer determines whether learning reaches the job
Employee performance	Competence and HRD practices are associated with improved performance	Employee performance is a key mediator
Productivity and innovation	Positive evidence from longitudinal and firm-level studies	Training contributes to operational and innovative capability
Financial performance	Positive in some studies but less direct and more context-dependent	Financial returns are downstream outcomes

The overall result is that employee training and development have a positive impact on organizational performance when learning is relevant, transferred to work, supported by managers, and aligned with organizational objectives. The evidence does not justify treating training expenditure by itself as a guarantee of performance. What matters is the quality of the training system and the extent to which new capability changes workplace behavior and business processes.

Conclusion and Discussion

This paper concludes that employee training and development are strategically important contributors to organizational performance. Research published up to 2019 shows that training can produce meaningful improvements in learning, behavior, employee performance,

productivity, innovation, and in some condition's financial performance. However, the relationship is not automatic. Organizational benefits depend on needs assessment, program quality, learner motivation, transfer opportunities, managerial support, reinforcement, and the strategic relevance of the capability being developed. The discussion suggests a multi-level explanation of impact. Training first develops knowledge and skill; transfer determines whether learning is used; improved employee performance then accumulates into operational and organizational outcomes. This explanation is consistent with the transfer model of Baldwin and Ford (1988), the meta-analytic evidence of Arthur et al. (2003) and Blume et al. (2010), and firm-level findings from Saks and Burke-Smalley (2014), Kim and Ployhart (2014), Boadu et al. (2018), and Otoo's 2019 studies. For managers, the practical implication is to move from counting training

hours toward measuring capability and business impact. Training budgets should be directed toward verified skill gaps and strategic priorities. Supervisors should provide opportunities to apply new skills, coaching, feedback, and reinforcement. Evaluation should combine learning measures with behavioral, operational, and where possible financial indicators. Development activities should also prepare employees for future responsibilities and organizational change. The main limitation of this paper is that it synthesizes prior literature rather than collecting primary organizational data. Future empirical research can test the proposed framework using longitudinal data, objective performance indicators, and mediation or moderation analysis. Even with this limitation, the pre-2020 evidence provides a clear conclusion: training and development create organizational value most reliably when they are designed as an integrated performance system rather than as isolated events.

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