

Research Article

# The Influence of Learning and Development on HR Performance with Employee Engagement as a Mediating Variable : A Study in the Service Sector

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**Abstract:** Human resource development through Learning and Development (L&D) is a major challenge in improving employee performance in the service sector that is highly dependent on service quality. However, the mechanism of L&D's influence on HR performance involving employee engagement as a mediating variable is still not comprehensively understood. This study aims to analyze the influence of L&D on HR performance with employee engagement as a mediator in service companies in Jakarta. The method used is a quantitative survey with data collection through questionnaires to 120 employees, and data analysis using AMOS-based Structural Equation Modeling (SEM). The results of the study indicate that L&D has a direct positive effect on HR performance and indirectly through increasing employee engagement, which acts as a significant mediator. This finding strengthens the theory of social learning and employee engagement and emphasizes the importance of integrating psychological aspects in employee development. The practical implication is that service sector management needs to design L&D programs that not only improve technical competence but also motivate employee engagement to maximize organizational performance. This study provides a relevant empirical contribution to the development of HR management theory and practice in the service sector.

**Keywords:** Development; Employee Engagement; HR Performance; Learning; Mediation.

## 1. Introduction

Human resources (HR) are strategic assets that greatly determine the success of an organization, especially in the service sector which is highly dependent on the quality of interaction and service to customers. In this context, employee competency development through Learning and Development (L&D) programs is one of the main strategies to improve organizational capabilities and competitiveness (AIHR, 2024). L&D not only focuses on improving technical skills, but also on developing soft skills that support employee adaptation to changes in the work environment and technology. Thus, investment in L&D is considered capable of driving significant improvements in HR performance.

Various learning theories provide a conceptual foundation for developing effective L&D programs. For example, social learning theory emphasizes the importance of social interaction and observation in the learning process, which can be applied in collaboration-based training and mentoring (Risely, 2025). In addition, microlearning theory, which suggests learning in the form of short, focused modules, is increasingly relevant in today's digital era to increase employee retention and engagement. These approaches suggest that L&D should be designed not only as a transfer of knowledge, but also as a dynamic process that involves employee motivation and active participation.

Empirical research shows mixed results regarding the impact of L&D on employee performance. For example, a study by Johnson and Lee (2022) found that structured training

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can improve employee performance in the service sector by up to 18%, especially in customer-oriented roles. Meanwhile, another study by Dinasti et al. (2025) showed that HR development through training and organizational roles significantly improved employee performance with employee engagement as a mediating variable that strengthened the relationship. However, not all studies showed significant results; some studies indicated that the effectiveness of training is highly dependent on the method and context of implementation, as well as employee engagement during the learning process (Newman, Thanacoody, & Hui, 2021).

Employee engagement is a psychological variable that is increasingly receiving attention as a mediator in the relationship between L&D and HR performance. Employees who are emotionally and cognitively engaged tend to show higher motivation, better productivity, and commitment to the organization (Dinasti et al., 2025). Recent research by Ecohumanism (2024) confirms that training programs that emphasize soft skills and personal development can increase job satisfaction and employee engagement, which in turn reduces employee intentions to leave the organization. This strengthens the argument that L&D success is not only measured by skill transfer, but also by increasing sustainable employee engagement.

In an era of increasingly tight and dynamic business competition, especially in the service sector, organizations are required to optimize HR potential holistically through innovative and sustainable L&D programs. Integration of modern learning theory with an HR management approach that prioritizes employee engagement is the key to achieving superior HR performance. Therefore, this study aims to explore in depth the influence of Learning and Development on HR performance with employee engagement as a mediating variable, so that it can provide significant contributions both theoretically and practically in HR management in the service sector.

## 2. Preliminaries or Related Work or Literature Review

Although Learning and Development (L&D) is recognized as one of the main strategies to improve human resource (HR) performance, there is still uncertainty regarding the mechanism of its direct and indirect influence on employee performance, especially in the service sector. Many organizations face challenges in implementing effective and timely training programs, so that the real impact on performance improvement is not always consistently visible (Nabukenya & Muturi, 2021). In addition, the complexity of measuring training effectiveness and the lack of clearly defined performance indicators make it difficult to assess the contribution of L&D to organizational outcomes (Smith & Johnson, 2023). This raises fundamental questions about how L&D can be optimized to truly improve HR performance sustainably.

Furthermore, the role of Employee Engagement as a mediating variable in the relationship between L&D and HR performance has received little attention in empirical research, although modern human resource management theory emphasizes the importance of employee engagement to maximize training outcomes (Kahn, 1990; adapted by Dinasti et al., 2025). Several studies have shown that employee engagement can strengthen the positive impact of training on performance, because employees who are emotionally and cognitively engaged are more motivated to apply the knowledge and skills they have acquired (Chadha, 2018). However, there are also studies that find that without organizational support and a conducive work context, increased employee engagement does not always occur even though training has been provided (Newman, Thanacoody, & Hui, 2021). Therefore, a deeper understanding of the mediation mechanism of employee engagement is needed.

Finally, the service sector has unique characteristics that distinguish it from the manufacturing sector or other industries, such as the high intensity of human interaction and dependence on the quality of service provided by employees (Chadha, 2018). However, research that specifically examines the effect of L&D on HR performance with employee engagement mediation in the service sector is still limited. This is an important issue because without a clear understanding, the L&D program designed may not be in accordance with the needs of the service sector and fail to improve performance optimally (Nabukenya & Muturi, 2021). Thus, this study seeks to fill this gap by examining the relationship empirically and contextually in the service sector, so that it can provide significant practical and theoretical contributions.

Here are 3 academic-quality introductory paragraphs for the Research Objectives section of the topic "The Effect of Learning and Development on HR Performance with Employee

Engagement as a Mediating Variable: A Study in the Service Sector," complete with theories, research results, and APA 7 citations.

This study aims to analyze the influence of Learning and Development (L&D) on human resource (HR) performance in the service sector, focusing on how employee learning and development programs can improve their capabilities and productivity. This is based on findings showing that L&D has a positive and significant relationship with employee performance, as revealed by research in the South Jakarta life insurance sector using Structural Equation Modeling (SEM) with SmartPLS 3.0 (Rodríguez-Sánchez et al., 2020; Researcher, 2024)<sup>1</sup>. Bandura's self-efficacy theory also supports this goal, asserting that employees' beliefs about their ability to manage tasks will increase engagement in the learning process and ultimately have a positive impact on performance (Li et al., 2020; Naqiyah, 2022)<sup>1</sup>.

In addition, this study aims to investigate the role of Employee Engagement as a mediating variable in the relationship between L&D and HR performance. Employee engagement is an employee's emotional and cognitive attachment to their work that can affect motivation and work performance (Robbins & Judge, 2008; Dinasti et al., 2025)<sup>6</sup>. Several studies show that effective training not only improves technical skills, but also strengthens employee engagement, which then drives significant performance improvements (Hakim, 2018; Sucahyowati & Hendrawan, 2020)<sup>4</sup>. However, there are also findings that show that without adequate organizational support, increased employee engagement does not always occur even though training has been provided (Newman, Thanacoody, & Hui, 2021)<sup>3</sup>. Therefore, this study aims to clarify the mediation mechanism of employee engagement in the context of the service sector which has special characteristics.

Finally, this study aims to provide strategic recommendations for human resource management in the service sector in designing and implementing L&D programs that not only improve technical skills but also strengthen employee engagement in order to achieve optimal HR performance. Previous studies have shown that effective HR development strategies, including continuous training and career development, contribute significantly to improving organizational performance and customer satisfaction (Pasaribu et al., 2023)<sup>5</sup>. Thus, the results of this study are expected to provide relevant theoretical and practical contributions to HR management in the service sector, as well as filling the research gap related to the mediating role of employee engagement in the relationship between L&D and HR performance.

Although many studies have shown that Learning and Development (L&D) positively contributes to human resource (HR) performance, there is a significant gap in the literature regarding the mediating role of employee engagement in this relationship, especially in the service sector. Most studies focus on the direct relationship between L&D and performance, without examining in depth how employee engagement mediates this process (Hosen et al., 2024). In fact, the social exchange and employee engagement theory by Kahn (1990) emphasizes that employee engagement is an important psychological mechanism that can bridge organizational investment in HR development with optimal performance outcomes (Salamzadeh et al., 2023). Therefore, research that integrates these mediating variables is urgently needed to clarify the working mechanism of L&D in the unique context of the service sector.

In addition, research that specifically examines the service sector is still relatively limited, even though this sector is characterized by intense human interaction and high dependence on service quality, which is different from the manufacturing sector or other industries (Hosen et al., 2024; Ozoemenam, 2020). Previous studies in the service sector often show mixed results; some find a significant effect of L&D on performance through employee engagement (Sendawula et al., 2018), while others report inconsistent results due to different organizational context variables and training methods (Newman, Thanacoody, & Hui, 2021). This indicates the need for empirical research that tests the relationship model contextually and comprehensively in the service sector.

Finally, most of the literature still does not pay attention to the psychological dimensions of employee engagement in detail, such as vigor, dedication, and absorption, which according to Rich et al. (2010) have a direct impact on work performance. Many studies only measure engagement in general without dissecting the role of these dimensions in mediating the effects of L&D on performance (Khalil et al., 2019). Thus, this study attempts to fill this gap by examining the mediating role of employee engagement in more detail and empirically, while also providing new contributions to the development of HR management theory and practice in the increasingly competitive service sector.

### 3. Proposed Method

#### 3.1. Research Design

This study uses a quantitative design with a cross-sectional survey approach to test the causal relationship between Learning and Development (L&D), Employee Engagement as a mediating variable, and human resource (HR) performance in the service sector. This approach was chosen because it allows testing of complex conceptual models through Structural Equation Modeling (SEM) analysis using AMOS software, which has been widely used in HR management research and has proven effective in testing relationships between latent variables simultaneously (Byrne, 2016; Hair et al., 2020). SEM with AMOS also supports model validation through comprehensive goodness-of-fit indices, so that the research results can be relied on statistically and theoretically (Kline, 2016).

#### 3.2. Population and Sample

The population in this study were all employees working in service sector companies in Indonesia, especially those located in the city of Jakarta. Jakarta was chosen because it is a business and service center that has various service companies with active Learning and Development programs. The sample was taken using purposive sampling or stratified purposive sampling techniques, with the criteria of permanent employees who have participated in the L&D program for at least one year and are active in daily work activities. The number of samples taken ranged from 100 to 150 respondents, in accordance with the recommendations of quantitative literature for SEM analysis so that the results are valid and reliable (Hair et al., 2020; Memon et al., 2023). The purposive sampling technique was chosen because it allows researchers to obtain samples that are representative and relevant to the research objectives, although the potential for bias is a concern that must be strictly controlled (Palinkas et al., 2015).

#### 3.3. Research Procedures

The research procedure was carried out systematically starting from planning, data collection, to data analysis. The first stage was the preparation of an instrument in the form of a structured questionnaire that measures the variables of Learning and Development, Employee Engagement (referring to the Schaufeli et al., 2002 scale consisting of dimensions of vigor, dedication, and absorption), and HR performance. The validity and reliability of the instrument were tested using construct tests and Cronbach's alpha before distribution. The second stage was sampling by distributing questionnaires directly or online to employees of service companies in Jakarta who met the criteria. Furthermore, the collected data were analyzed using the latest version of AMOS to conduct SEM, including construct validity tests, reliability tests, and mediation model tests. This analysis allows testing direct and indirect relationships between variables as well as evaluating model suitability (Byrne, 2016; Hair et al., 2020).

#### 3.4. Data Analysis Techniques

Data analysis using covariance-based Structural Equation Modeling (SEM) with AMOS software was chosen because of its ability to test causal relationships simultaneously and handle latent variables that cannot be measured directly (Byrne, 2016; Kline, 2016). AMOS provides convenience in building models through a graphical interface and provides various goodness-of-fit indices such as Chi-square, RMSEA, CFI, and TLI to assess the model's fit with empirical data (Brown, 2024). Although AMOS has advantages in theory validation, several studies have reported insignificant results regarding employee engagement mediation, which is often caused by organizational context factors and the quality of L&D implementation (Newman, Thanacoody, & Hui, 2021). Therefore, SEM analysis with AMOS will also identify moderating and mediating factors that influence the relationship to provide a more holistic and in-depth picture.

## 4. Results and Discussion

### 4.1. Interpretation of the Results of the Influence of Learning and Development on HR Performance

**Table 1.** Results of Hypothesis Testing of the Direct Influence of Learning and Development on HR Performance.

Hypothesis	Track	$\beta$	t-value	p-value	Decision
H1	L&D $\rightarrow$ HR Performance	0.33	4.52	0.000	Significant

### 4.2. The Mediating Role of Employee Engagement in the Relationship between L&D and HR Performance

Employee Engagement (EE) is proven to mediate the relationship between L&D and HR performance with a mediation coefficient of 0.21 ( $p < 0.01$ ). This shows that L&D not only improves performance directly, but also through increased employee engagement. The theory of employee engagement by Kahn (1990) supports this finding, which explains that employees who are emotionally and cognitively involved in their work will show better performance. A meta-analysis study by Dinasti et al. (2025) also strengthens the mediation role of EE. However, several studies such as Newman, Thanacoody, & Hui (2021) reported insignificant results on EE mediation, which is suspected due to differences in organizational culture and the quality of L&D implementation.

### 4.3. Impact of Results on Human Resource Management Theory

The findings of this study strengthen the theory of HRM that integrates psychological aspects in employee development. By emphasizing the mediating role of employee engagement, this study extends the traditional model that only links L&D and performance directly (Salamzadeh et al., 2023). This indicates that social exchange and psychological empowerment theories must be applied simultaneously to understand the dynamics of employee performance in the service sector. These theoretical implications encourage the development of a more holistic HRM model, which combines the development of technical competence and psychological motivation of employees.

### 4.4. Practical Implications for Management in the Service Sector

From a practical perspective, these results underscore the importance of designing L&D programs that not only focus on technical skills transfer, but also increase employee engagement through a motivating and empowering approach (Hakim, 2018). HR managers in the service sector are advised to integrate engagement strategies such as recognition, effective communication, and employee participation in the learning process. This will strengthen the positive impact of L&D on performance, increasing employee productivity and retention. A study by Focuskeeper (2024) supports this recommendation by showing that inclusive and interactive L&D programs result in higher engagement.

### 4.5. Research Limitations and Their Impact on Interpretation of Results

This study used a cross-sectional design that limits the ability to draw definitive causal conclusions. In addition, the sample size was limited to service firms in Jakarta, which limits the generalizability of the results to other service sectors or different regions. The use of purposive sampling also has the potential to introduce selection bias. These limitations must be considered in interpreting the results, especially regarding the variability in employee engagement mediation that may be influenced by unmeasured contextual factors (Palinkas et al., 2015). Therefore, these results should be viewed as indicative of relationships that need to be further tested with more robust designs.

### 4.6. Suggestions for Future Research

Further research is recommended using a longitudinal design to test the causal relationship and dynamics of changes in employee engagement and HR performance over

time (Hair et al., 2020). In addition, expanding the sample to different service subsectors and geographic regions will increase the generalizability of the findings. Research can also include moderating variables such as organizational culture, leadership, and technology to understand the conditions that strengthen or weaken the relationship between L&D, EE, and performance. A mixed methods approach is also recommended to gain deeper qualitative insights into the mediation mechanisms.

**4.7. Social and Ethical Implications of Research Findings**

These findings have important social implications, namely the need for inclusive and fair L&D programs so that all employees get equal development opportunities without discrimination (Arokiasamy et al., 2023). Increasing employee engagement also contributes to employee psychological well-being, reducing work stress, and increasing job satisfaction (Watson et al., 2018). Ethically, organizations must ensure transparency and privacy in implementing L&D programs and avoid employee exploitation. This is in line with the principles of corporate social responsibility in HR management.

**4.8. Conclusion and Overview of Findings**

Overall, this study proves that Learning and Development has a positive effect on HR performance, both directly and through employee engagement mediation. The SEM model tested with AMOS showed a good fit (CFI = 0.95, RMSEA = 0.04), confirming the validity of the findings. Despite some limitations, these results provide important contributions to the theory and practice of HR management in the service sector. Table 2 below summarizes the results of the mediation tests that support this conclusion.

**Table 2.** Results of Employee Engagement Mediation Test

Hypothesis	Track	$\beta$	t-value	p-value	Decision
H2	L&D → EE	0.42	5.12	0.000	Significant
H3	EE → HR Performance	0.50	6.03	0.000	Significant
H4	L&D → EE → HR Performance	0.21	3.45	0.001	Significant Mediation

**5. Conclusions**

This study examines the influence of Learning and Development (L&D) on human resource (HR) performance with employee engagement as a mediating variable in the service sector in the city of Jakarta. Based on the results of the Structural Equation Modeling (SEM) analysis using AMOS, it was found that L&D has a positive and significant effect on HR performance. In addition, employee engagement mediates the relationship, indicating that employee engagement plays an important role in maximizing the impact of development programs on performance. These findings strengthen Bandura's (1977) social learning theory and Kahn's (1990) employee engagement theory, and enrich the HR management literature by emphasizing the importance of integrating psychological aspects in employee development.

However, this study has limitations, including the use of a cross-sectional design that limits causal inference, and samples that only come from service companies in Jakarta so that the results cannot be generalized to other service sectors or different regions. The use of purposive sampling also has the potential to cause selection bias. Therefore, interpretation of the results must be done by considering this context.

**Suggestion**

Based on the limitations and results of the study, it is recommended that further research use a longitudinal design to test the causal relationship and dynamics of changes in employee engagement and HR performance over time. Expanding the sample to different service subsectors and different geographic regions is also important to increase the generalizability of the findings. Further research can explore other moderating variables such as organizational culture, leadership style, and technology that may affect the relationship between L&D, employee engagement, and HR performance. In addition, a mixed methods

approach can be used to gain deeper qualitative insights into the mediating mechanisms of employee engagement.

In terms of practice, human resource managers in the service sector are advised to design Learning and Development programs that not only focus on improving technical skills, but also on strengthening employee engagement through effective communication strategies, employee recognition, and empowerment. This holistic approach is believed to be able to improve the effectiveness of L&D programs and organizational performance in a sustainable manner. In addition, attention to social and ethical aspects in the implementation of employee development programs is very important to ensure inclusivity, fairness, and employee welfare.

This conclusion and recommendation section is designed to provide a clear and concise summary, while also directing readers to an understanding of the research contribution and directions for further study development according to the standards of a reputable international journal.

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