

# Strategic HR Planning and Human Capital Investment in Improving Employee Performance: Mediation of Employee Engagement and Moderation of Psychological Safety

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Article history: Received December 02, 2025; revised January 04, 2026; accepted February 04, 2026

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## ABSTRACT

*Changes in the work environment and demands for improved employee performance have made human resource management an increasingly important strategic factor, including in religious educational institutions. Organizations need not only targeted HR planning, but also investment in human capital development and a work environment that supports employee engagement. This study aims to analyze the effect of Strategic Human Resource Planning and Human Capital Investment on Employee Performance with Employee Engagement as a mediating variable and Psychological Safety as a moderating variable. This study used a quantitative approach with explanatory research. The research population consisted of employees and educators at the Inspiratif Al Ilham Islamic Boarding School in Bojongsoang, West Java. The sampling technique used was simple random sampling with a sample size of 100 respondents. Data were collected through questionnaires and analyzed using Partial Least Squares structural equation Modelling (PLS-SEM) using SmartPLS. The results showed that human capital investment and strategic human resource planning played a role in increasing employee engagement, which, in turn, drove performance improvement. Psychological safety has also been found to strengthen the relationship between engagement and performance, enabling employees to work optimally in a psychologically safe environment. This study implies that educational institutions should strengthen human resource investment, build work engagement, and create a supportive work climate to improve employee performance in a sustainable manner.*

**Keywords:** Human Capital Investment, Strategic Human Resource Planning, Psychological Safety, Employee Engagement, Employee Performance

## INTRODUCTION

In recent years, organizations have faced pressure to maintain performance amid changing work patterns, increasing service quality demands, and increasingly complex work relationship dynamics. These challenges are not only experienced by profit-oriented companies, but also by value-based educational institutions that must ensure effective educational services while maintaining the quality of their human resources. At the practical level, many organizations still experience the "human resource paradox": human resource development programs have been implemented, but they do not always have a consistent impact on improving employee performance. Recent literature emphasizes that employee performance cannot be explained solely by technical job factors but is greatly influenced by the quality of the HR system, psychological support in the workplace, and employee commitment to the organization (Saks, 2022; Edmondson & Lei, 2014/reviewed in Newman et al., 2023). Therefore, research examining the mechanisms of improving employee performance through HR strategies and psychological factors is important and urgent, especially for organizations that rely on human quality as the "main engine" for achieving their goals. This research was conducted at the Inspirational Islamic Boarding School Al Ilham (Bojongsoang, West Java) because Islamic boarding schools generally have different HR management characteristics from formal educational organizations. Islamic boarding schools not only carry out educational functions, but also value cultivation, character building, and a community-based work culture that is thick with social-hierarchical relations (kiai/ustadz-santri-employees). This uniqueness makes the issue of psychological safety (the feeling of security in expressing ideas/input without fear of negative consequences) highly relevant, because hierarchical social structures can either strengthen or weaken the courage to express opinions and take

initiative at work. Evidence shows that psychological safety is related to learning behavior, voice, collaboration, and performance quality in organizations (Newman et al., 2023; O'Donovan et al., 2021). Thus, the Inspirational Islamic Boarding School Al Ilham becomes an interesting context to test whether modern HR strategies (strategic HR planning and human capital investment) work in the same pattern or differently than other similar institutions.

This study places Strategic Human Resource Planning (X1) and Human Capital Investment (X2) as the main predictors of Employee Performance (Y), with Employee Engagement (Z) as the mediating mechanism, and Psychological Safety (M) as the moderating variable. Theoretically, human capital investment (e.g., training, competency development, and skills enhancement) is associated with increased individual capacity and quality of work contributions, which can ultimately drive performance (Martins, 2021; Rahman & Akhter, 2021). However, this impact often works through psychological and behavioral processes, one of which is employee engagement, —a condition in which employees feel energized, involved, and meaningful in their work, thereby more consistently demonstrating good performance (Saks, 2022; Xie et al., 2022). On the other hand, the engagement–performance relationship can become stronger when employees feel psychologically safe to take initiative and express ideas (Quansah et al., 2023). Therefore, this study tests a more realistic model: not only "whether" HR strategies improve performance, but also "through what" (engagement mediation) and "under what conditions" (psychological safety moderation), the effect becomes more optimal.

Although research on engagement, psychological safety, and HR practices has grown rapidly, several important gaps remain. First, many studies examine the direct effect of HR practices on performance, even though recent evidence shows that indirect pathways through engagement often better explain how performance is formed (Saks, 2022; Babalola et al., 2024). Second, studies on psychological safety often focus on industrial or healthcare contexts and are more frequently tested as consequences or mediators rather than moderators that strengthen the relationship between engagement and performance (O'Donovan et al., 2021; Quansah et al., 2023). Third, recent research emphasizes the need for contextual understanding; social relations, hierarchical structures, and organizational culture can shape psychological safety and influence the effectiveness of HR strategies (Newman et al., 2023; Wang & Ning, 2024). Fourth, there is still limited research that simultaneously tests mediation-moderation models in value-based educational institutions, such as Islamic boarding schools, —even though their characteristics are very different from those of profit organizations and formal schools. In other words, the literature is rich in variables, but still lacks the integration of models and research contexts, especially in religious educational institutions.

Based on these gaps, the novelty of this study lies in testing an integrative model that combines (1) the influence of Strategic HR Planning and Human Capital Investment on Employee Performance, (2) the role of Employee Engagement as a mediator, and (3) the role of Psychological Safety as a moderator in the engagement–performance relationship, in the context of the Inspirational Islamic Boarding School Al Ilham as a value-based educational institution. Theoretically, this study broadens the understanding of HRM and organizational behavior by placing psychological safety as a reinforcing condition in the performance pathway, while enriching empirical evidence in the context of community-based non-profit organizations. Practically, the results of this study are expected to assist pesantren managers and similar educational institutions in developing more focused HR planning, sharpening impactful HR development investments, and building a psychologically safe work climate to encourage initiatives and performance. The objectives of this study are (1) to analyze the effect of strategic HR planning on employee engagement, (2) to analyze the effect of human capital investment on employee engagement, (3) to examine the effect of employee engagement on employee performance, (4) to examine the effect of psychological safety on employee performance, (5) to examine the mediating role of employee engagement in the influence of X1 and X2 on Y, and (6) to examine the moderating role of psychological safety in the engagement–performance relationship.

## LITERATURE REVIEW

### Strategic Human Resource Planning

Strategic Human Resource Planning is a systematic process of designing an organization's long-term workforce that needs to align with the organization's vision, strategy, and objectives. Strategic HR planning not only covers the fulfilment of workforce numbers, but also ensures that employee competencies and capabilities are in line with the demands of an ever-changing work environment. According to Al-Douri et al. (2021), strategic HR planning is a key element for improving organizational effectiveness through more

focused and adaptive talent management. In addition, strategic HR planning can create a structured work system so that employees have clarity of roles and work direction, which can increase motivation and work engagement (Boon et al., 2022). Thus, strategic HR planning is seen as an important foundation for building a competitive organization by strengthening the quality of human resources.

### **Human Capital Investment**

Human Capital Investment refers to an organization's investment in developing individuals' knowledge, skills, competencies, and capacity through training, education, and career development programs. This investment is considered a key strategy in creating a competitive advantage because human capital is an asset that is not easily replicated by other organizations. Malik and Sanders (2022) showed that investment in human capital has a significant impact on employee productivity and work effectiveness. In addition, HR investment also increases the sense of appreciation, so that employees are more loyal and motivated to contribute maximally (Renaud et al., 2021). Therefore, human capital investment is a strategic factor for building a high-performance and sustainable workforce.

### **Employee Engagement**

Employee Engagement is a positive psychological condition that reflects employees' level of energy, dedication, and involvement in their work. High engagement makes employees more enthusiastic, strongly committed, and willing to go the extra mile for the success of the organization. According to Karatepe and Karadas (2022), employee engagement is a key predictor of performance improvement because engaged employees are more productive and have better work orientation. Engagement is also related to work well-being and reduces burnout levels, thereby creating more stable long-term performance (Bakker & Albrecht, 2023). Thus, employee engagement is an important mechanism for bridging the influence of organizational policies on performance outcomes.

### **Psychological Safety**

Psychological Safety is defined as an individual's perception that the work environment is safe for taking interpersonal risks such as expressing ideas, asking questions, or admitting mistakes without fear of embarrassment or punishment. Psychological safety is essential for creating collaborative and innovative work culture. Frazier and Tupper (2022) confirmed that psychological safety improves team effectiveness and encourages employees to contribute actively. In addition, psychological safety is a key factor in increasing trust and communication within an organization, which ultimately has an impact on work performance (Lee & Dahling, 2021). Therefore, psychological safety is seen as a psychological condition that supports the optimization of employee engagement and performance.

### **Employee Performance**

Employee Performance is the result of an employee's work, both in terms of quantity and quality, which contributes to the achievement of organizational goals. Performance reflects an individual's effectiveness in carrying out tasks and ability to adapt to job demands. According to Koopmans et al. (2021), employee performance is influenced by a combination of organizational, psychological, and work environment factors. In addition, performance is closely related to organizational support for competency development and a conducive work climate (Jiang et al., 2022). Thus, employee performance is a key indicator of HR management success in an organization.

### **Relationships Between Variables in the Study**

In this study, strategic HR planning and human capital investment were viewed as organizational factors that can increase employee engagement. Engagement becomes a psychological mechanism that drives increased employee performance. Additionally, psychological safety acts as a moderator that strengthens the influence of engagement on performance. A study by Zhang et al. (2023) showed that the engagement–performance relationship becomes stronger when employees feel psychologically safe in the work environment. Thus, this research model emphasizes that improving employee performance depends not only on HR strategies, but also on emotional attachment and the support of a safe psychological climate.

### **Hypothesis Development**

#### **The Influence of Strategic Human Resource Planning on Employee Engagement**

Strategic Human Resource Planning is a systematic workforce planning process to ensure that organizations

have human resources that are in line with long-term strategic needs. Strategic HR planning helps organizations establish policy directions, competency mapping, and more structured talent management. When HR planning is carried out clearly, employees feel a sense of role certainty, organizational support, and clarity of work objectives. This encourages a sense of emotional attachment and a higher motivation at work.

Previous research shows that strategic HR planning practices can increase employee engagement because employees feel more valued and involved in achieving the organization's vision (Boon et al., 2022). In addition, a well-planned HR system also increases job security, making employees more committed to the organization (Al-Douri et al., 2021). Thus, strategic HR planning is an important factor in building sustainable employee engagement.

**H1:** Strategic Human Resource planning has a positive effect on Employee Engagement.

### **The Influence of Human Capital Investment on Employee Engagement**

Human Capital Investment reflects an organization's investment in improving employee skills and competencies through training, education, career development, and improving the quality of human resources. This investment signals that the organization cares about employee development, thereby fostering a sense of appreciation and increasing emotional attachment to the organization.

According to Malik and Sanders (2022), human capital investment significantly contributes to increasing employee motivation and loyalty. When organizations provide opportunities for self-development, employees will be more engaged because they feel they have a future in the organization. Renaud et al. (2021) also emphasize that human capital development encourages employee engagement through an increased sense of belonging and commitment to work. Therefore, the higher the human capital investment, the higher the employee engagement.

**H2:** Human Capital Investment positively affects on Employee Engagement.

### **The Influence of Employee Engagement on Employee Performance**

Employee Engagement is a positive psychological condition characterized by enthusiasm, dedication, and active involvement in work. Engaged employees tend to work more focused, be more productive, and have a high commitment to contributing their best to the organization.

Karatepe and Karadas (2022) found that employee engagement has a strong relationship with increased job performance, as work attachment encourages extra-role behavior and quality work results. In addition, Bakker and Albrecht (2023) stated that engagement is a major predictor of performance because engaged employees are more resilient and able to work optimally under various conditions. Thus, employee engagement plays an important role in improving employee performance.

**H3:** Employee Engagement has a positive effect on Employee Performance.

### **The Influence of Psychological Safety on Employee Performance**

Psychological safety is the perception that the work environment is safe for expressing ideas, asking questions, or taking interpersonal risks, without fear of punishment or humiliation. A psychologically safe environment allows employees to work more openly, innovatively, and confidently to carry out their duties.

Lee and Dahling (2021) explain that psychological safety increases work effectiveness because employees feel comfortable collaborating with and expressing their opinions. In addition, Frazier and Tupper (2022) emphasized that psychological safety encourages learning and work adaptation, which improves individual and team performance. Therefore, psychological safety is an important factor for improving employee performance.

**H4:** Psychological Safety positively affects Employee Performance.

### **The Mediating Role of Employee Engagement in the Relationship between Human Capital Investment and Employee Performance**

Human capital investment not only has a direct impact on performance improvement but also works through psychological mechanisms in the form of employee engagement. When organizations provide training and competency development, employees feel more valued, thereby increasing their work engagement. This engagement then becomes the main driver of performance improvement.

Jiang et al. (2022) emphasize that HR investment has a significant impact on performance through engagement as an intermediary mechanism. In addition, Zhang et al. (2023) showed that employee engagement is a mediator that explains how HR development policies can produce higher performance.

Thus, engagement plays an important role in bridging the gap between human capital investment and performance.

**H5:** Employee Engagement mediates the influence of human capital investments on employee performance.

### **The Moderating Role of Psychological Safety in the Relationship between Employee Engagement and Employee Performance**

Although employee engagement has a positive effect on performance, the strength of this relationship varies depending on the work environment. Psychological safety is a contextual factor that strengthens the influence of engagement on performance. Engaged employees perform better when they feel safe to take initiative, express ideas, and work without fear.

Quansah et al. (2023) found that psychological safety strengthens the engagement–performance relationship because a safe environment increases the effectiveness of employee contributions. In addition, Wang and Ning (2024) emphasize that psychological safety acts as a catalyst that allows engagement to be translated into maximum performance output. Thus, psychological safety is an important moderator of this relationship.

**H6:** Psychological safety moderates the relationship between employee engagement and employee performance such that the relationship becomes stronger when psychological safety is high.

### **METHODOLOGY**

This study used a quantitative approach with explanatory research. The quantitative approach was chosen because this study aimed to test the causal relationship between variables through numerical data measurement and structured statistical analysis. Explanatory research was used to explain the influence of Strategic Human Resource Planning and Human Capital Investment on Employee Performance, both directly and through the role of Employee Engagement as a mediating variable and Psychological Safety as a moderating variable. The analysis method used in this study is Partial Least Squares structural equation Modelling (PLS-SEM) because the research model involves several latent constructs with complex simultaneous relationships. PLS-SEM is considered suitable for predictive research, has a mediation and moderation model, and has a medium sample size (Hair et al., 2022).

### **Research Location and Time**

This research was conducted at Pondok Pesantren Inspiratif Al Ilham, a religious educational institution located in Bojongsoang District, West Java Province. The selection of this research location was based on the characteristics of Islamic boarding schools, which have a unique human resource management system, as they not only carry out formal educational functions but also foster religious values and a community work culture. These conditions make the pesantren a relevant object for testing the application of strategic HR planning and human capital investments to improve employee performance. This study was conducted from January to March 2026, covering the stages of instrument development, data collection, data processing, and analysis of the research results.

### **Sources and Types of Data**

The primary and secondary data were used in this study. Primary data were obtained directly from respondents through the distribution of questionnaires to employees and educators at Inspiratif Al Ilham Islamic Boarding School. Primary data were used to capture respondents' perceptions of strategic HR planning, human capital investment, employee engagement, psychological safety, and employee performance. Secondary data were obtained from internal institutional documents, scientific literature, research journals, and references relevant to the research topics. The simultaneous use of primary and secondary data aims to strengthen the validity and depth of research analysis (Saunders et al., 2021).

### **Research Population and Sample**

The study population consisted of all employees and educators working at the Al Ilham Bojongsoang Inspirational Islamic Boarding School in West Java, with a population of approximately 120 people. Because the population was accessible, this study used a portion of the population as the research sample. Probability sampling was used with the simple random sampling method, which is a random sampling technique so that each member of the population has the same chance of becoming a respondent. The sample size was determined based on the minimum size recommendation in PLS-SEM analysis, namely the 10-times rule, where the minimum sample size is ten times the largest number of paths leading to the dependent construct

(Hair et al., 2022). Based on this research model, the minimum sample size was 40 respondents; however, this study used 100 respondents to make the results stronger and more representative.

### Data Collection Techniques

The data collection in this study was conducted by distributing a closed questionnaire to the respondents. The questionnaire was compiled using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The Likert scale was used because it can quantitatively measure respondents' attitudes and perceptions and produce consistent data for statistical analysis (Joshi et al., 2020). The statements in the questionnaire were compiled based on variable indicators adapted from previous studies that had been tested for validity and reliability. Thus, this research instrument could be trusted to measure the constructs under study.

### Research Instrument

The instrument in this study was a questionnaire consisting of five main constructs: Strategic Human Resource Planning, Human Capital Investment, Employee Engagement, Psychological Safety, and Employee Performance. Each construct was measured using reflective indicators that described respondents' perceptions of the actual conditions in the work environment. The use of reflective indicators in PLS-SEM requires convergent validity, where the outer loading value of each indicator must be greater than 0.70 to be considered valid in reflecting the construct (Hair et al., 2022). This research instrument was designed to capture the relationships between the variables in accordance with the research objectives.

### Data Analysis Techniques

Data analysis in this study was conducted using SmartPLS 4 software with a Partial Least Squares-based Structural Equation Modelling approach. The first stage of the analysis was the evaluation of the outer or measurement model, which aimed to test the validity and reliability of the indicators in measuring the construct. The outer model was assessed through convergent validity with a loading factor above 0.70, discriminant validity using the Fornell-Larcker criteria, and construct reliability through composite reliability, which must exceed 0.70 and Average Variance Extracted (AVE) above 0.50 (Hair et al., 2022). The second stage is the evaluation of the inner or structural model, which aims to test the relationship between constructs through R-square values, path coefficients, and the significance of t-statistics and p-values obtained through the bootstrapping procedure (Henseler et al., 2021). In addition, this study tested the effect size (f-square) to determine the contribution of each independent variable to the dependent variable. Furthermore, mediation testing was conducted through indirect effects to assess the role of Employee Engagement as a mediator, whereas moderation testing was conducted through interaction effects to assess the role of Psychological Safety in strengthening the relationship between engagement and performance (Sarstedt et al., 2022).

### Operational Definition of Variables

Operational definitions of variables were used to explain the concepts of the research variables in a measurable way through the indicators used in the questionnaire. The variables in this study consisted of independent, dependent, mediating, and moderating variables, as shown in the following table.

Table 1. Operational Variables

Variable	Operational Definition	Main Indicators
Strategic Human Resource Planning (X1)	Strategic workforce planning to support organisational objectives	Human resource requirements planning, talent management
Human Capital Investment (X2)	Organisational investment in training and competency development	Training, career development
Employee Engagement (Z)	Level of emotional attachment and work motivation among employees	Dedication, work ethic
Psychological Safety (M)	Perception of safety to express opinions without fear of consequences	Courage to express ideas
Employee Performance (Y)	Employee work results in terms of quality and quantity	Productivity, work quality

## RESEARCH RESULTS AND DISCUSSION

## Data Analysis

**Assessing the Outer Model or Measurement Model**

When applying data analysis techniques using SmartPLS, the assessment of the outer model is based on three main criteria: Convergent Validity, Discriminant Validity, and Composite Reliability. These three criteria were used to ensure that the indicators used were able to accurately reflect the construct, clearly distinguish between constructs, and show internal consistency between indicators in a single latent variable.

**Convergent Validity**

Convergent validity in measurement models with reflective indicators is evaluated based on the strength of the correlation between the item or component scores generated by the Smart PLS software and the measured construct. A reflective indicator was considered to have good convergent validity if its correlation value exceeded 0.70. This indicates that the indicator can adequately explain the latent variable because its contribution to the construct is sufficiently strong and consistent.

Table 2. *Outer Loadings (Measurement Model)*

	Employee Engagement (Z)	Employee Performance (Y)	Human Capital Investment (X2)	Psychological Safety (M)	Strategic Human Resource Planning (X1)	Psychological Safety (M) x Employee Engagement (Z)
M.1				0.945		
M.2				0.946		
M.3				0.925		
M.4				0.947		
M.5				0.939		
X1.1					0.922	
X1.2					0.941	
X1.3					0.937	
X1.4					0.945	
X1.5					0.933	
X2.1			0.923			
X2.2			0.946			
X2.3			0.947			
X2.4			0.925			
X2.5			0.944			
Y.1		0.894				
Y.2		0.906				
Y.3		0.919				
Y.4		0.919				
Y.5		0.891				
Z.1	0.941					
Z.2	0.941					
Z.3	0.941					
Z.4	0.938					
Z.5	0.935					
Psychological Safety (M) x Employee Engagement (Z)						1,000

The outer loading test results show that all indicators in each construct have very high loading values above the minimum limit of 0.70, so they can be declared to meet the convergent validity criteria. The psychological safety indicators (M.1–M.5) had loading values ranging from 0.925 to 0.947, indicating that the psychological safety construct was measured very strongly by its indicators. The strategic human resource planning (X1.1–X1.5) and human capital investment (X2.1–X2.5) indicators also showed high loading values, each above 0.92, indicating that strategic human resource planning and human capital investment are consistently and reliably represented. Furthermore, the employee engagement indicators (Z.1–Z.5) had loading values above 0.93, while the employee performance indicators (Y.1–Y.5) ranged from 0.89 to 0.92, confirming that these two constructs were measured strongly and stably. In addition, the psychological safety  $\times$  employee engagement interaction construct had a loading value of 1.000, indicating that the moderating variable was perfectly formed in the model. Overall, these results confirm that all constructs in this study have excellent measurement quality and are suitable for further structural analysis.

### **Discriminant Validity**

Discriminant validity testing was conducted to ensure that each construct of the latent variables was truly unique and did not overlap with the other constructs. A model is said to have good discriminant validity if each indicator has the highest loading value on the construct it measures compared with the loading on other constructs. The results of the discriminant validity test are as follows:

Table 3. Discriminant Validity Values (*Fornell-Larcker*).

Employee Engagement (Z)	Employee Performance (Y)	Human Capital Investment (X2)	Psychological Safety (M)	Strategic Human Resource Planning (X1)
Employee Engagement (Z)	0.939			
Employee Performance (Y)	0.933	0.906		
Human Capital Investment (X2)	0.975	0.929	0.937	
Psychological Safety (M)	0.974	0.930	0.995	0.940
Strategic Human Resource Planning (X1)	0.954	0.968	0.971	0.936

### **Composite Reliability.**

The validity and reliability of the constructs can also be evaluated through the construct reliability value and Average Variance Extracted (AVE) value for each construct. A construct is considered to have adequate reliability if its reliability value reaches a minimum of 0.70 and its AVE value exceeds 0.50. This indicates that the construct is not only consistent in measuring what it should measure, but is also able to explain most of the variance of its indicators, so that it can be trusted as a valid representation of the concept in question.

Table 4. *Composite Reliability* Values

	Cronbach's alpha	Composite reliability (rho_c)	Composite reliability (rho_c)	Average Variance Extracted (AVE)
Employee Engagement (Z)	0.967	0.967	0.974	0.883
Employee Performance (Y)	0.945	0.948	0.958	0.821

		Cronbach's alpha	Composite reliability (rho_c)	Composite reliability (rho_c)	Average Variance Extracted (AVE)
Human Capital Investment (X2)	0.965	0.966	0.973	0.878	
Psychological Safety (M)	0.967	0.969	0.975	0.884	
Strategic Human Resource Planning (X1)	0.964	0.965	0.972	0.875	

From Table 4, it can be concluded that all constructs meet the reliability criteria. This can be seen from the composite reliability value exceeding 0.70 and the AVE value above 0.50, in accordance with the recommended limits in validity and reliability testing.

## Structural Model Testing (*Inner Model*)

Testing the inner model or structural model aims to assess the relationship between constructs, level of significance, and R-square value of the constructed model. The structural model was evaluated by examining the R-square value in the dependent construct and testing the t-statistic value and significance of the path coefficients connecting the latent variables.

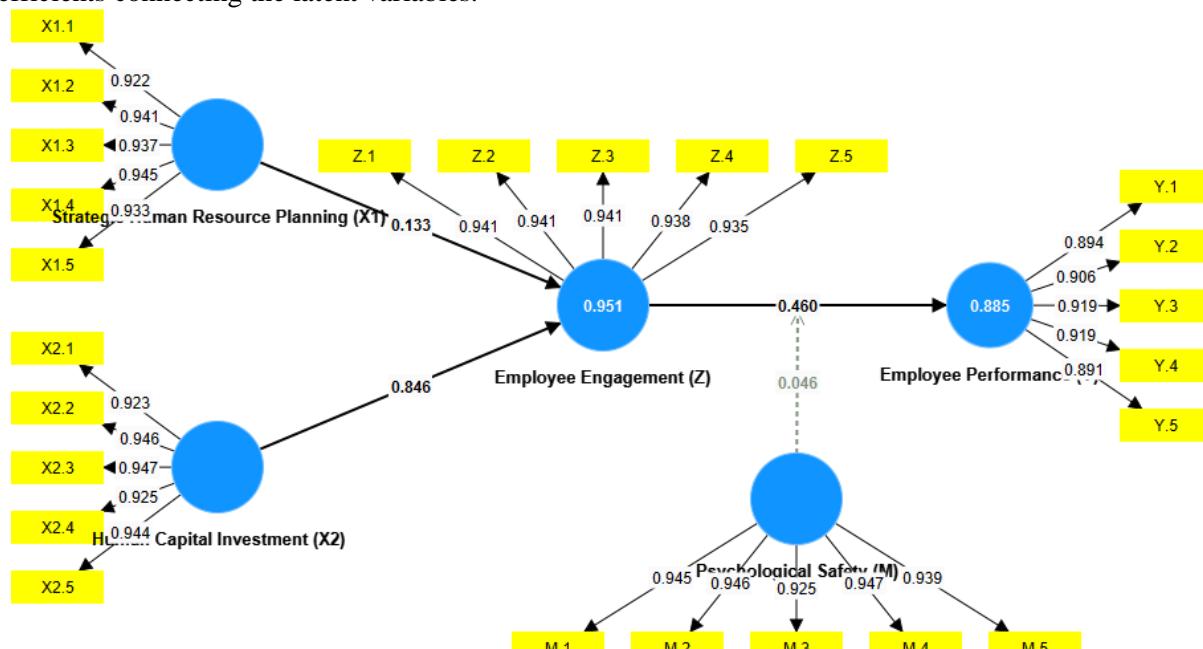


Figure 1. Tested structural model

In assessing the model with PLS, we begin by examining *the R-square* for each dependent latent variable. Table 5 presents the results of *the R-square* estimation using SmartPLS

Table 5 *R-Square Values*

Table 5. R-Square values		
	R-square	Adjusted R-squared
Employee Engagement (Z)	0.951	0.951
Employee Performance (Y)	0.885	0.884

Table 5 shows that based on the results of the coefficient of determination test, the R-square value of 0.951 for the Employee Engagement (Z) variable indicates that Strategic HR Planning and Human Capital Investment are able to explain 95.1% of the variation in Employee Engagement, which indicates a very strong explanatory power of the model. Because the Adjusted R-square value is the same (0.951), confirming the stability of the model even when considering the number of predictors used. Meanwhile, the R-square value of 0.885 for Employee Performance (Y) indicates that the combination of Strategic HR Planning and Human Capital Investment, with Employee Engagement as the mediating variable and Psychological Safety as the moderating variable, can explain 88.5% of the variation in employee performance, with an Adjusted

R-square of 0.884, which indicates that the model remains robust and is not biased due to the complexity of the model. Overall, these findings reinforce that strategic HR planning and human capital investment play a significant role in improving employee performance, particularly through strengthening employee engagement and supporting a safe psychological climate within the organization.

## Hypothesis Test Results

### Direct (Partial) Effect

Table 6. Hypothesis Test Results for the Direct (Partial) Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T-statistic ( O/STDEV )	P-values	Alpha	Conclusion
Employee Engagement (Z) -> Employee Performance (Y)	0.460	0.455	0.082	5.596	0.000	0.05	Influential Positive Significant
Human Capital Investment (X2) -> Employee Engagement (Z)	0.846	0.848	0.056	14.986	0.000	0.05	Significantly Positive Influence
Psychological Safety (M) -> Employee Performance (Y)	0.517	0.524	0.087	5.939	0.000	0.05	Significantly Positive Influence
Strategic Human Resource Planning (X1) -> Employee Engagement (Z)	0.133	0.131	0.057	2.341	0.019	0.05	Significantly Positive Influence
Psychological Safety (M) x Employee Engagement (Z) -> Employee Performance (Y)	0.046	0.047	0.015	2.966	0.003	0.05	Significantly Positive Influence

Table 6 shows that the partial test results of the variables studied all have t-statistics values greater than the t-table value of 1.968 and P-values smaller than 0.05, indicating a significant effect.

#### 1. Effect of Employee Engagement on Employee Performance

Employee Engagement (Z) has a positive and significant effect on Employee Performance (Y) with a path coefficient of 0.460, a t-statistic value of 5.596 (greater than the t-table value of 1.968), and a p-value of 0.000 (less than 0.05). These results indicate that a high level of employee engagement encourages improved performance as engaged employees tend to have greater motivation, commitment, and responsibility to complete their work.

#### 2. The Effect of Human Capital Investment on Employee Engagement

Human Capital Investment (X2) was proven to have a positive and significant effect on Employee Engagement (Z), with a coefficient of 0.846, a t-statistic of 14.986, and a p-value of 0.000. These findings indicate that organizational investment in the form of training, competency development, and improvement of human resource quality significantly determines the level of employee engagement with the organization.

#### 3. Influence of Psychological Safety on Employee Performance

Psychological Safety (M) has a positive and significant effect on Employee Performance (Y) with a path coefficient of 0.517, t-statistic of 5.939, and p-value of 0.000. This shows that a work environment that provides psychological safety allows employees to work more effectively, take initiative, and express ideas without fear, thereby improving their performance.

#### 4. Effect of Strategic Human Resource Planning on Employee Engagement

Strategic Human Resource Planning (X1) has a positive and significant effect on Employee Engagement (Z), with a coefficient of 0.133, a t-statistic value of 2.341 that exceeds the t-table, and a p-value of

0.019. Although its influence is relatively smaller than that of other variables, strategic HR planning still plays an important role in building employee engagement through clear policy direction, HR needs planning, and structured talent management.

##### 5. Moderating Effect of Psychological Safety on the Relationship between Employee Engagement and Employee Performance

The interaction test results show that Psychological Safety (M) moderates the influence of Employee Engagement (Z) on Employee Performance (Y) positively and significantly, with an interaction coefficient of 0.046, t-statistic of 2.966, and p-value of 0.003. This finding confirms that psychological safety strengthens the effect of employee engagement on performance, whereby employees with high levels of engagement will be able to demonstrate optimal performance when supported by a psychologically safe work environment.

##### Mediation Effect

In this analysis, the high coefficients of both the direct and indirect effects were examined. Testing through mediation is conducted to further explore whether the mediating variable successfully mediates the effect of the independent variable on the dependent variable. If the *P-value* is less than 0.05, then the independent variable affects the dependent variable, as described in the *indirect effect output*, if it affects the dependent variable through the mediating variable. The results of the path analysis in the *indirect effect output* show that if the *P-value* is less than 0.05, mediation occurs (Sofyani, 2013:27).

Table 7. Results of the Mediation Effect Hypothesis Test

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T-statistic ( O/STDEV )	P-values	Description
Human Capital Investment (X2) → Employee Engagement (Z) → Employee Performance (Y)	0.389	0.383	0.060	6.488	0.000	Mediating

Based on the results in the table, the following can be explained:

##### 1. The Mediating Effect of Employee Engagement on the Relationship between Human Capital Investment and Employee Performance

The results of the indirect effect test show that Employee Engagement (Z) mediates the effect of Human Capital Investment (X2) on Employee Performance (Y), with a path coefficient of 0.389, a t-statistic of 6.488 (greater than the t-table of 1.968), and a p-value of 0.000 (less than 0.05). These findings indicate that investment in human capital not only has a direct impact, but also improves employee performance through increased employee engagement. In other words, Human Capital Investment can drive performance more effectively when it succeeds in increasing employee engagement as an intermediary mechanism.

##### 2. The Mediating Effect of Employee Engagement on the Relationship Between Strategic Human Resource Planning and Employee Performance

Unlike the previous path, the test results show that Employee Engagement (Z) does not mediate the effect of Strategic Human Resource Planning (X1) on Employee Performance (Y), as indicated by a coefficient of 0.061, t-statistic of 1.811, which is less than the t-table of 1.968, and p-value of 0.070, which is greater than 0.05. These results indicate that strategic human resource planning has not been able to significantly improve employee performance through employee Engagement; therefore, the role of employee engagement as a mediating variable in this relationship has not been empirically proven.

##### Effect Size (f square)

The effect size ( $f^2$ ) was used to assess the magnitude of the specific influence of an independent variable on the predictive ability of the dependent variable. The evaluation was performed by comparing the changes in  $R^2$  values when an independent variable was removed from the model. The value of  $f^2$  can be expressed as follows:

1.  $f^2 < 0.02$  indicates a very small or insignificant effect
2.  $0.02 \leq f^2 < 0.15$  indicates a small effect
3.  $0.15 \leq f^2 < 0.35$  indicates a moderate effect
4.  $f^2 \geq 0.35$  indicates a large effect.

Based on the analysis results, the effect size values for each variable were as follows:

Table 8. Effect Size (f-square)

	f-square
Employee Engagement (Z) -> Employee Performance (Y)	0.091
Human Capital Investment (X2) -> Employee Engagement (Z)	0.833
Psychological Safety (M) → Employee Performance (Y)	0.110
Strategic Human Resource Planning (X1) → Employee Engagement (Z)	0.021
Psychological Safety (M) x Employee Engagement (Z) → Employee Performance (Y)	0.043

Based on the results in the table, the following can be explained:

1. Effect of Employee Engagement on Employee Performance

The effect size ( $f^2$ ) of the influence of Employee Engagement (Z) on Employee Performance (Y) is 0.091, which is in the small effect category. These results indicate that, although employee engagement has a significant effect on employee performance, its specific contribution to the predictive ability of employee performance is relatively limited when compared to other variables in the model.

2. The Effect of Human Capital Investment on Employee Engagement

The effect of Human Capital Investment (X2) on Employee Engagement (Z) has an  $f^2$  value of 0.833, which falls into the large-effect category. This finding indicates that investment in human capital, such as training, competency development, and improving the quality of human resources, is a dominant determining factor in increasing employee engagement.

3. The Effect of Psychological Safety on Employee Performance

The effect size ( $f^2$ ) of Psychological Safety (M) on Employee Performance (Y) is 0.110, which is classified as a small effect. This indicates that psychological safety makes a significant but relatively moderate contribution to improving employees' performance.

4. Effect of Strategic Human Resource Planning on Employee Engagement

The effect of Strategic Human Resource Planning (X1) on Employee Engagement (Z) has an  $f^2$  value of 0.021, which falls into the small-effect category, close to very small. This finding indicates that strategic HR planning makes a limited contribution to improving employee engagement compared with other predictor variables.

5. Moderating Effect of Psychological Safety on the Relationship between Employee Engagement and Employee Performance

The effect size ( $f^2$ ) value of the interaction between Psychological Safety (M) and Employee Engagement (Z) on Employee Performance (Y) is 0.043, which falls into the small-effect category. This result indicates that psychological safety plays a role in strengthens the influence of employee engagement on employee performance, but its predictive contribution is relatively small in the overall research model.

## Discussion

### The Influence of Human Capital Investment on Employee Engagement

The results of this study confirm that organizational investment in human capital—such as training, competency development, career strengthening, and continuous learning—encourages employee engagement because employees feel that the organization "provides resources" for growth. From a *resource-based* perspective, such investments strengthen individual capacity and foster psychological energy, which is the foundation of engagement. These findings are consistent with the idea that a development-oriented HR system will increase engagement through perceptions of organizational support and concern for employees (Saks, 2022). Engagement increases when organizations are able to create work experiences that facilitate learning, meaningfulness, and the belief that employee contributions are valued, —which ultimately strengthens emotional and cognitive attachment to work (Mazzetti et al., 2021).

However, not all contexts have such a strong impact. In organizations where training is formalistic or

disconnected from work needs, human capital investment may be perceived as merely an administrative agenda. As a result, engagement does not increase significantly. Additionally, if promotions or performance recognition are inconsistent after development programs, employees may view the investment as "promises without follow-through." This study differs from previous studies in that it focuses on value-based/community-based institutions (such as Islamic boarding schools/religious schools), where development investments are often interpreted not only as skill enhancement, but also as strengthening social roles and dedication. This dimension can accelerate engagement when investments are perceived to be in line with the institution's mission.

### **The Influence of Strategic HR Planning on Employee Engagement**

This study shows that strategic HR planning contributes to engagement, because good planning creates clarity of direction, division of roles, and more structured work expectations. When employees understand an organization's goals, priorities, and plans (e.g., HR requirements, development plans, and workload arrangements), they tend to feel that their work is more "manageable," making it easier for them to be actively involved. In the context of modern HR, aligning HR strategy with organizational strategy, —including data-driven and digital approaches, —can also strengthen employee experience because HR decisions become more transparent and responsive (Ruiz et al., 2024).

However, several studies have found that HRD/HR planning practices do not always directly increase engagement if employees do not feel "tangible results" at the job level (e.g., unclear implementation, lack of plan communication, or limited resources). In certain cases, strategic planning is perceived as a bureaucratic control if it is not accompanied by employee participation. Here, they research findings become interesting: they confirm that strategic planning is important, but its effectiveness on engagement is highly dependent on the quality of implementation and its connection to employees' daily needs. This distinguishes our research from studies that focus on large corporations; in community-based educational organizations, engagement is more easily formed through the meaning of work, role models, and social climate; therefore, therefore, strategic HR planning needs to be "translated" into practices that are directly felt.

### **The Influence of Employee Engagement on Employee Performance**

The findings of this study reinforce the view that engagement is a "psychological engine" that drives performance. Engaged employees tend to show higher work energy, stronger focus, and willingness to complete tasks beyond minimum standards. Theoretically, engagement increases *self-regulation* and persistence, —making employees more resilient to pressure and more adaptive to completing work. Research synthesis evidence shows that engagement is associated with various positive outcomes including job satisfaction, commitment, and performance (Mazzetti et al., 2021).

However, some studies also caution that engagement does not automatically translate into performance if the organization does not provide a clear performance appraisal system, adequate work tools, or consistent leadership. In situations of a high workload without support, engagement can turn into strain, resulting in suboptimal performance. An important distinction in your research is the inclusion of psychological safety as a reinforcing condition so that engagement becomes more "productive" (rather than merely enthusiastic).

### **The Influence of Psychological Safety on Employee Performance**

This research supports the argument that psychological safety improves performance because employees feel safe asking questions, expressing ideas, reporting mistakes, and experimenting without fear of embarrassment or blame. In many contexts, psychological safety has been shown to be the foundation of *learning behaviour*, which ultimately improves work quality. A synthesis of evidence in the service/complex organization sector confirms that psychological safety is associated with improvements in processes, communication, and team effectiveness (Grailey et al., 2021). In addition, recent studies have shown that psychological safety is also relevant for improving psychological and functional outcomes in various forms of modern organizations (Dong et al., 2024).

Findings that do not support this are usually found in organizations with highly hierarchical structures, where the norm of "silence for harmony" is more dominant than a culture of dialogue. Under such conditions, efforts to build psychological safety are often hampered by *power distance* and fear of social consequences. What distinguishes your research from previous studies is the context of Islamic boarding schools/religious schools, which often have a culture of respect for authority, which can make psychological safety a more "crucial" factor in opening up communication so that performance can improve steadily.

## **The Moderating Role of Psychological Safety in the Relationship Between Employee Engagement and Employee Performance**

The results of this study show that psychological safety not only has a direct impact on performance but also strengthens the influence of engagement on performance. Conceptually, engagement provides energy and willingness to work, while psychological safety provides a "safe space" for that energy to be realized in concrete actions: expressing ideas, trying new ways of doing things, collaborating, and correcting mistakes. Empirical evidence in high-risk industries shows that the influence of engagement on performance can vary according to the level of psychological safety. When safety is high, the impact of engagement becomes stronger because employees dare to execute proactive work behaviors (Quansah et al., 2023). Other findings also emphasize that psychological safety can shape engagement through collaboration mechanisms and quality of work interactions (McCray, 2024).

Studies that do not support moderation typically occur when organizations have very strict SOPs, resulting in relatively limited room for initiative. In such situations, engagement still increases routine output, but psychological safety does not change much because work behavior is constrained by procedures. The novelty of your research lies in testing moderation in the context of community-based educational organizations, where performance is not only individual output but often involves social coordination, role modelling, and collective contributions. This means that psychological safety becomes a "lever" for engagement to translate into visible and sustainable performance.

## **The Mediating Role of Employee Engagement in the Relationship between Human Capital Investment → Employee Performance**

This study reinforces the model that human capital investment improves performance not only because skills increase but also because such investment fosters engagement as a psychological mechanism that motivates employees to use their competencies optimally. When training and development are perceived as relevant, employees tend to respond with higher engagement, which facilitates performance through focus, persistence, and work discipline. The conceptual model of caring HRM also explains that HR practices that "provide tangible support" will create a caring climate, prompting employees to respond with engagement and positive work behavior (Saks, 2022).

In contrast to this pathway, when strategic HR planning fails to drive performance through engagement, it may be because planning is *top-down* and does not address daily work experiences. In the context of educational institutions/communities, engagement often grows from role models, social relationships, and the meaning of work; thus, strategic planning will only drive performance if it is realized as tangible practices that are felt (fair workload allocation, clear development, rewards, and open communication). Thus, our findings provide an important distinction: Human capital investment tends to be more directly "felt" by employees than abstract strategic planning, —making it easier to trigger engagement and impact performance.

## **CONCLUSIONS, PROPOSALS, RECOMMENDATIONS**

This study aims to analyze the role of Strategic Human Resource Planning and Human Capital Investment in improving Employee Performance, with Employee Engagement as a mediating variable and Psychological Safety as a moderating variable, at the Inspirational Islamic Boarding School Al Ilham in Bojongsoang, West Java. Based on the research results, it can be concluded that strategic human resource management and organizational investment in human capital development are important factors in building employee engagement and improving performance. Employee engagement emerges as the main psychological mechanism that explains how investment in human resources can translate into a more optimal performance improvement. Psychological safety has also been proven to play an important role in creating a supportive work environment, enabling employees to work with greater confidence, openness, and productivity. Overall, this study confirms that improving employee performance not only depends on formal HR policies but also on employee emotional attachment and a safe psychological climate within the organization.

This study has several important theoretical and practical implications. Theoretically, it enriches the human resource management literature by showing that the relationship between HR strategies and employee performance is not always direct but often works through the mediating mechanism of employee engagement. These findings support modern organizational behavior approaches that emphasize the importance of psychological factors as a link between organizational policies and performance outcomes. In addition, this study adds a new contribution by placing psychological safety as a contextual factor that

strengthens the influence of engagement on performance, especially in religious-based organizational environments, which are rarely studied in HRM.

Practically, this research provides input for the management of Pondok Pesantren Inspiratif Al Ilham and similar educational institutions to prioritize investment in HR development, such as training, competency development, and employee capacity-building programs. Organizations also need to develop a more focused HR planning system so that employees have clarity about their roles and work directions. Additionally, it is important for institutional leaders to create a climate of psychological safety, which is a work environment that supports open communication, values ideas, and provides a sense of security for employees to take initiatives without fear. Thus, organizations can encourage higher employee engagement and produce more optimal performance.

This study has several limitations that need to be considered. First, this research was conducted at only one institution, namely the Al Ilham Inspirational Islamic Boarding School, so generalizing the results of the research to other institutions needs to be done with caution, especially since Islamic boarding schools have cultural characteristics and organizational structures that differ from other formal organizations. Second, this research used a quantitative approach based on questionnaires; therefore, the data obtained were highly dependent on the respondents' perceptions and allowed for subjective bias. Third, the variables used in this study were limited to strategic HR planning, human capital investment, employee engagement, psychological safety, and employee performance, while there are many other factors, such as leadership, organizational culture, and job satisfaction, which have the potential to affect employee performance but were not analyzed in this study.

Based on these limitations, future research is recommended to expand the research object to other educational institutions or organizations with different values, so that the research results can be compared and stronger generalizations can be obtained. Future researchers are also recommended to use a mixed methods approach by adding interviews or observations to gain a deeper understanding of the dynamics of engagement and psychological safety within organizations. In addition, future research could include other variables such as transformational leadership, organizational culture, and job satisfaction to enrich the research model and provide a more comprehensive picture of the factors that influence employee performance. Thus, studies on HR strategies and employee behavior can continue to develop and make a broader contribution to both human resource management theory and practice.

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