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THE ROLE OF EDUCATION, JOB ANALYSIS, AND WORK TENURE ON EMPLOYEE PERFORMANCE FOR FILLING STRUCTURAL POSITIONS

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Abstract

In order to ensure the effective placement of structural positions, good judgment is required to ensure productivity and operational efficiency. This study analyzes factors such as education, job analysis, and tenure, which may affect employee performance to fill structural positions in PLTU Asam-Asam. Methods used are quantitative and perform hypothesis testing by utilizing Structural Equation Modeling - Partial Least Squares (SEM PLS). The population in this study is 183 PLTU Asam-Asam employees, and the entire population will be used as research subjects. The study's findings revealed that education, job analysis, and work tenure had a positive and significant influence on employee performance, both partially and simultaneously. This study concluded that to improve employee performance for structural position fulfillment, it is necessary to pay attention to the combination of relevant educational background, comprehensive job analysis, and appropriate work tenure. The suggested policies are to increase competency-based training programs, improve the job evaluation system, and adopt a merit-based promotion policy to ensure alignment between an individual and the targeted structural position.

Keywords: Education, job analysis, work tenure, employee performance, structural position.

Introduction

Employee performance is crucial in maintaining the company's operational efficiency and productivity (Chauke et al., 2022). Competent and well-trained human resources can ensure the smooth running of operational processes, especially in filling structural positions that require unique expertise (Safrizal et al., 2019). Several key factors play a role in employee performance are education, job analysis and length of service. Education is essential in improving the quality of human resources (Aiuby & Hayati, 2023). It is because education not only equips a person with the technical skills needed for the job but also develops the ability to think critically, analyze information, and solve problems. The work environment that demands adjustments to technological developments requires employees who have an adequate level of education, because they are considered more adaptable (Maritsa et al., 2021). Related to these contexts, education enhances individuals' ability to perform their duties effectively and supports organizations in achieving their strategic goals by strengthening human resource performance (Pamungkas & Nawawi, 2025).

Besides the educational aspect, position analysis is important in placing employees with the right expertise in the correct position. The position analysis is used to identify and evaluate the needs of a job, including the requirements and characteristics of the workforce needed (Anggraini et al., 2024). Likewise, job analysis plays a role in identifying and assessing the needs that must be met by an organization (Billik et al., 2023). As a result, companies can determine the criteria that workers must possess, especially in the placement of positions, with the results in the form of detailed job specifications and job descriptions. This role not only eases the recruitment process but also increases the effectiveness of employee performance assessment, training, and career development. Tenure also contributes to shaping employee competencies. The longer one's work experience, the more operational challenges one can overcome. Tenure is the leading indicator that affects employee performance. Work tenure represents a person's time spent in a particular job or position (Lubis, 2020). Employees who have worked longer usually have a deeper understanding of work processes, responsibilities, and company culture. This allows them to complete tasks more efficiently and contribute meaningfully to achieving organizational goals (Kirani et al., 2024).

Employee performance is a key element that affects the success of an organization. The term performance comes from job performance or actual performance, which refers to the work results or concrete achievements of a person. Performance includes various activities carried out to carry out and complete tasks and responsibilities in accordance with predetermined goals and expectations (Jayanti & Dewi,

2021). Performance refers to the accomplishment of work outcomes, measured by both quality and quantity, that an employee attains in fulfilling assigned duties and responsibilities (Nugroho et al., 2022). It represents the extent to which an employee successfully carries out tasks in line with established responsibilities, covering both qualitative and quantitative aspects.

This research analyzed employee performance on one of the Steam Power Plant (*Pembangkit Listrik Tenaga Uap* [*PLTU*]) and focuses on PLTU Asam-Asam, South Kalimantan. In the context of PLTU Asam-Asam, employee performance is important in maintaining operational efficiency and company productivity. Most of the workforce at PLTU Asam-Asam has an engineering education background, but there are gaps in the managerial competencies required for structural positions. The distribution of employee education levels shows the dominance of engineering backgrounds. However, there is also a small group of employees with non-engineering educational backgrounds who can provide different perspectives on managing the company.

The performance data of PLTU Asam-Asam shows that several indicators have not yet reached the optimal target. For instance, until November 2024, the Efficiency Forced Outage Rate (EFOR) exceeded the 3.20% threshold, and employee productivity only reached 93.53% of the target. Other indicators, such as the absorption of maintenance costs, have also not been maximized. This condition raises a fundamental research question: Are these suboptimal performance outcomes related to the misalignment between structural position placements and employees' educational backgrounds, job analysis results, or length of service? Alternatively, is employee placement already appropriate, meaning that other factors outside the scope of education, job analysis, and tenure are more influential?

Formulating this problem clearly is important because if structural positions are not aligned with employees' qualifications and experience, the positive effects of education and tenure cannot be fully realized. Conversely, if alignment already exists, then organizational performance issues may stem from other systemic or managerial factors. This dual possibility highlights the urgency of further research to empirically test the role of education, job analysis, and work tenure in influencing employee performance at PLTU Asam-Asam. Driven by these concerns, this study aims to investigate how education, job analysis, and tenure affect employee performance in filling organizational positions.

Education

Education plays a significant role in shaping superior and competent human resources, especially in the industrial world that requires a workforce with high technical and managerial competence (Siregar et al., 2024). Education equips individuals with the skills, insights, and mindset needed to accomplish their duties and responsibilities optimally. In an increasingly developing and challenging world of work, employees with higher levels of education tend to more easily understand operational processes, master the latest technology, and adjust to the dynamics of change in the organization (Taufik & Nugroho, 2020). Therefore, education is the main factor determining an employee's readiness to face increasingly complex work demands.

H_1: Education affects Employee Performance for Structural Positions.

Job Analysis

Job analysis improves employee performance, especially in fulfilling structural positions. The job analysis process aims to understand the job demands, authority, responsibilities, and qualifications required for each position. The function analysis ensures that the position being filled matches the needs of the organization and the competencies possessed by prospective employees, resulting in optimal performance. Job analysis also provides a clearer picture of the standard of work expected from each position. Several studies, such as (Fatimah et al., 2023) and (Lestari & Asmara, 2024), have conducted research related to position analysis, showing that positions significantly influence employee performance. On the other hand, research by (Rusly et al., 2022) and (Blikololong & Foeh, 2022) shows that Job Analysis does not significantly affect employee performance.

H_2: Position Analysis affects Employee Performance for Structural Position.

Work Tenure

Tenure contributes significantly to employee performance. The longer an employee's tenure, the higher their chances of having in-depth knowledge and experience of various aspects of the company's operations. The experience gained over many years of work can influence how employees face job challenges and make the right decisions, especially in structural positions requiring a higher level of leadership and decision-making. Moreover, employees with longer tenure generally possess a deeper grasp of the organization's culture and internal dynamics, which serves as a valuable asset in fulfilling responsibilities within structural positions. Research by (Jayanti & Dewi, 2021) and (Ivana et al., 2022) shows that the Working Period significantly influences employee performance. In contrast, research by (Kereh et al.,

2018) and (Sari & Sitohang, 2019) suggests that the Period of Service does not significantly affect employee performance.

H3: Work Tenure affects Employee Performance for Structural Position.

Employees who have worked longer generally have broader experience and a deeper understanding of work and organizational dynamics. This allows them to handle complex situations more confidently and contribute more to achieving company goals. Long-time employees also tend to have stronger emotional ties to the organization, which can increase commitment and motivation to perform better. Overall, education, job analysis, and tenure support each other in shaping optimal employee performance, especially when filling structural positions. Ensuring that employees have the appropriate education, are placed in the correct position based on job analysis, and have sufficient experience.

H4: Education, Position Analysis, and Work Tenure affect Employee Performance for Structural Positions.

Based on the formulated hypothesis, this study developed the theoretical framework, which illustrates the relationship between education, job analysis, and tenure in shaping employee performance. The theoretical framework is presented in Figure 1.

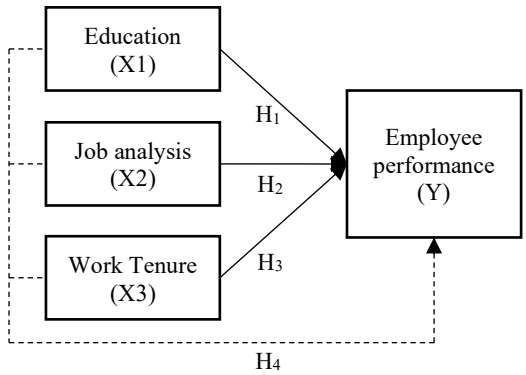

Figure 1. Research framework

Research Methods

This study employs a quantitative approach, as its primary aim is to examine the causal relationships among the observed variables using statistical analysis (Sugiyono, 2021). The independent variables consist of Education Level, Job Analysis, and Work Tenure, while Employee Performance serves as the dependent variable. To test the proposed hypotheses, the research utilizes the Partial Least Squares Structural Equation Modeling (PLS-SEM) method.

Population and Sampling

The population in this study is all employees working at PLTU Asam-Asam, consisting of a total of 183 people. Considering the population size, which was relatively small, this study used total sampling in which all population members were sampled. This technique was chosen because it allows research to obtain more accurate and representative data without generalizing based on a smaller sample.

Data were collected using a five-point Likert scale, where 1 represents Very Poor, 2 Poor, 3 Fair, 4 Good, and 5 Very Good. The operational definitions of the study variables are presented in Table 1.

Table 1
Research operational variables

Variable	Indicator	Definition
Education (X1)	The effort to optimize human potential to manage available natural resources to improve the welfare of society (Amiruddin, 2016).	a. Level of Education b. Major Suitability c. Competence (Supriyatna, 2020)
Position Analysis (X2)	The method used to identify and evaluate the needs of a job, both in terms of requirements and the workforce needed. (Anggraini et al., 2024)	a. Authority b. Responsibility c. Working Conditions d. Work Facilities e. Work Result Standards f. Education and Training g. Competence (Lestari & Asmara, 2024)
Work Tenure (X3)	The duration of a person's employment in a particular job or position that affects his or her performance (Lubis, 2020)	a. Job Satisfaction b. Environmental Stress c. Career Development d. Compensation for Work Results (Handoko, 2014)
Employee Performance (Y)	A series of activities are carried out to complete tasks and responsibilities by the expectations and goals that have been set (Jayanti & Dewi, 2021)	a. Quality of Work b. Quantity c. Timeliness d. Effectiveness e. Independence (Mangkunegara, 2009).

Results and Discussion

Results

The research subjects in this study are described based on gender, age, and length of service. The distribution of the data is presented in Table 2.

Table 2
Characteristics of the research subject

Characteristics	Category	Total
Gender	Men	182
	Women	1
Age	20 - 30 years old	83
	31 - 40 years old	96
	41 - 50 years old	1
	> 50 years old	4
Latest Education	Intermediate Technical School of Mechanical Engineering	46
	Bachelor of Mechanical Engineering	28
	Senior High School	22
	Intermediate Technical School of Electrical Engineering	18
	Bachelor of Economics	15
	Associate Degree in Mechanical Engineering	16
	Bachelor of Computer Science	7
	Associate Degree in Electrical Engineering	5
	Others	26
Work Tenure	< 1 year	10
	1 - 5 years	40
	6 - 10 years	80
	> 10 years	53

Source: Data Collection Results, 2025

Table 2 presents the characteristics of 183 subjects; the majority of them are male, with 182 subjects, while there is only one female respondent. This indicates that workers in PLTU Asam-Asam are dominated by men, which most likely relates to the nature of the work in the electricity sector, which requires more technical and operational personnel.

In terms of age, the majority of respondents were in the 31-40 years old range, with 96 people, followed by 83 respondents in the 20-30 years old range. Meanwhile, only one person is 41-50 years old, and four people are over 50 years old. This reflected that most of the workers at PLTU Asam-Asam were classified as productive workers with a relatively young age, who potentially had good adaptability to technological and innovations in the electricity industry.

Based on the latest education aspect, the majority of respondents have an engineering education background, with the largest number coming from the Intermediate Technical School of Mechanical Engineering, with 46 people, and the Bachelor's of Mechanical Engineering, with 28 people. In addition, there were 22 people who graduated from Senior High School, 18 people who graduated from Intermediate Technical School of Electrical, and a small number of graduates from non-engineering fields such as Bachelor's of Economics (15 people). In addition, 26 people were in the other education category. This distribution shows that most of the workers at the PLTU Asam-Asam have technical skills in accordance with the industry's needs, although there are also workers with educational backgrounds outside of the engineering field.

From a work tenure aspect, the majority of respondents have fairly long work experience. A total of 80 people have worked for 6-10 years, while 53 people have worked for more than 10 years. On the other hand, as many as 40 people have work experience of 1-5 years, and only 10 people have worked for less than 1 year. This indicates that PLTU Asam-Asam has relatively experienced Workers, which can contribute to maintaining operational stability and improving work efficiency within the company.

Overall, the characteristics of the research study illustrate that workers at the PLTU Asam-Asam are dominated by men of productive age, with a technical education background, and have a fairly long work experience. The combination of relatively young age, technical education background, and long work experience can be an important factor in analyzing the effect of education, job analysis, and tenure on employee performance in this company.

Outer Model Evaluation

The outer model evaluation is conducted to assess validity through convergent and discriminant validity, as well as to evaluate reliability using composite reliability and Cronbach's alpha for the indicator blocks being examined.

Convergent Validity

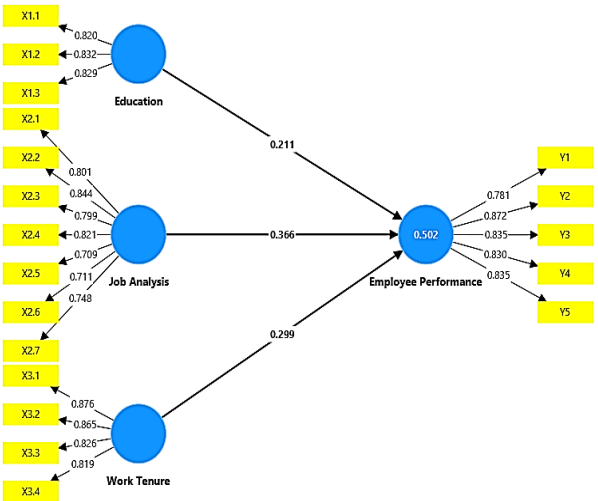

Figure 2. Algorithm results
Source: Data Processed, 2025

Convergent validity is assessed through the indicators of each construct. Chin (2015) states that an indicator is deemed valid if its value exceeds 0.70, although loading factors between 0.50 and 0.60 may still be regarded as acceptable.

Table 3
Outer loading

	E	JA	WT	EP
X1.1	0,852			
X1.2	0,734			
X1.3	0,809			
X2.1		0,725		
X2.2		0,763		
X2.3		0,785		
X2.4		0,787		
X2.5		0,827		
X2.6		0,703		
X2.7		0,802		
X3.1			0,750	
X3.2			0,797	
X3.3			0,791	
X3.4			0,777	
Y.1				0,762
Y.2				0,840
Y.3				0,825
Y.4				0,807
Y.5				0,730

Note: E: Education, JA: Job Analysis, WT: Work Tenure, EP: Employee Performance
Source: Data Processed, 2025

Table 3 indicates that all research variable indicators are valid, as each indicator has an Outer Loading value above 0.7. Therefore, the questionnaire items are suitable for further analysis..

Discriminant Validity

The next step is to evaluate the correlation between variables by comparing it to the root AVE (√AVE). A measurement model demonstrates adequate discriminant validity when the √AVE for each construct exceeds its correlations with other constructs. The √AVE can be obtained from the Fornell-Larcker Criterion output in SmartPLS 4.0, as shown in Table 5

Table 4
Fornell-larcker criterion

Variable	E	JA	WT	EP
Education	0.800	0.177	0.259	0.472
Job Analysis	0.177	0.811	0.150	0.595
Work Tenure	0.259	0.150	0.810	0.412
Employee Performance	0.472	0.595	0.412	0.844

Note: E: Education, JA: Job Analysis, WT: Work Tenure, EP: Employee Performance
Source: Data Processed, 2025

Table 4 shows that the AVE value for each construct exceeds the cut-off point of 0.50, indicating that convergent validity is achieved. Furthermore, Table 5 demonstrates that the square root of the Average Variance Extracted for each construct is greater than the correlations among the constructs in the model. For additional reference, Table 6 presents the results of the cross-loading analysis:

Table 5
Cross loading

	E	JA	WT	EP
X1.1	**0,852**	0,016	0,133	0,299
X1.2	**0,734**	0,045	0,221	0,241
X1.3	**0,809**	0,188	0,124	0,370
X2.1	0,082	**0,725**	0,119	0,414
X2.2	0,152	**0,763**	0,137	0,422
X2.3	0,125	**0,785**	0,094	0,419
X2.4	-0,034	**0,787**	0,102	0,390
X2.5	0,157	**0,827**	0,120	0,438
X2.6	-0,082	**0,703**	0,062	0,305
X2.7	0,167	**0,802**	0,113	0,441
X3.1	0,105	0,078	**0,750**	0,168
X3.2	0,163	0,129	**0,797**	0,276
X3.3	0,097	0,037	**0,791**	0,232
X3.4	0,185	0,150	**0,777**	0,417
Y.1	0,238	0,345	0,227	**0,762**
Y.2	0,317	0,444	0,359	**0,840**
Y.3	0,411	0,475	0,299	**0,825**
Y.4	0,271	0,463	0,340	**0,807**
Y.5	0,282	0,343	0,304	**0,730**

Note: E: Education, JA: Job Analysis, WT: Work Tenure, EP: Employee Performance
Source: Data Processed, 2025

Table 5 presents the cross-loadings value for each construct, which is higher than the correlation between other constructs in the model. Therefore, the construct in the estimated model has met the criteria of discriminant validity.

Table 6
Heterotrait-monotrait ratio

	Heterotrait-monotrait ratio (HTMT)
EP ↔ JA	0,595
WT ↔ JA	0,150
WT ↔ EP	0,412
E ↔ JA	0,177
E ↔ EP	0,472
E ↔ WT	0,259

Note: E: Education, JA: Job Analysis, WT: Work Tenure, EP: Employee Performance
Source: Data Processed, 2025

On the other hand, the Cut-Off limit for the Heterotrait-Monotrait Ratio (HTMT) value is less than 0.90 (Hair Jr et al., 2021). Table 7 shows that all of the

obtained HTMT values are below 0.9, in conclusion HTMT values have met the criteria for discriminant validity.

Average Variance Extracted (AVE)

Average Variance Extracted (AVE) was used to assess the extent to which a construct could be explained by its indicators, considering the error rate. The AVE test is considered more strict compared to composite reliability. Recommended AVE value is at least 0.50. The results of AVE calculations are presented in Table 7.

Table 7
Average Variance Extracted (AVE)

	AVE
Job Analysis	0,595
Employess Performance	0,630
Work Tenure	0,607
Education	0,640

Source: Data Processed, 2025

Referring to Table 7, the AVE value obtained is higher than 0.50. This indicates that all indicators have fulfilled the criteria.

Composite Reliability & Cronbach's Alpha

Composite Reliability and Cronbach's Alpha are examined to determine whether each latent variable meets the threshold value of ≥ 0.70. If this criterion is satisfied, the construct can be considered reliable, indicating that the item used in this study demonstrates consistency.

Table 8
Composite reliability & cronbach's alpha

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
JA	0,886	0,891	0,911
EP	0,853	0,864	0,895
WT	0,803	0,851	0,861
E	0,724	0,745	0,841

Note: E: Education, JA: Job Analysis, WT: Work Tenure, EP: Employee Performance

Source: Data Processed, 2025

As presented in Table 8, the results of the Composite Reliability and Cronbach's Alpha tests indicate adequate values. This suggests that the questionnaire employed as the research instrument is both reliable and consistent.

Inner Model

Once the model has been estimated and satisfies the Outer Model criteria, the subsequent step involves testing the structural model (Inner Model). This stage is intended to refine the model on the basis of theoretical concepts and to examine the relationships between exogenous and endogenous variables outlined in the conceptual framework. The testing of the structural model (Inner Model) is conducted through the following stages:

Model Fit

Table 9
Goodness of fit

	Saturated model	Estimated model
SRMR	0,091	0,091
d_ULS	1,580	1,580
d_G	0,851	0,851
Chi-square	795,035	795,035
NFI	0,619	0,619

Source: Data Processed, 2025

NFI values ranged from 0 to 1 and are obtained by comparing hypothesized models with specific independent models. Table 10 presents the NFI value of 0.701, indicating that the model has a level of suitability that can be categorized as good.

R-Square (R^2)

Looking at the R-Square value, which is the goodness-of-fit test of the model.

Table 10
R^2 value

	R-square	R-square adjusted
Employee Performance	0,458	0,449

Source: Data Processed, 2025

Table 10 presents an R^2 value of 0.458, which implies that about 45.8% of employee performance can be described by the constructed model, which includes independent variables such as job analysis, tenure, and education.

Effect Size (f^2)

The f-square (f^2) value indicates the effect of each predictor variable on the endogenous variable. The results of the F^2 value of each exogenous variable on the endogenous variable are as follows:

1. The f^2 result for job analysis on employee performance is 0.375. This value is above 0.35, which indicates

that job analysis has a "strong influence" on employee performance.
2. The f^2 result for the influence of working tenure on employee performance is 0.129. This value is within the range of 0.02 to 0.15, which indicates that the effect of working tenure on employee performance is "weak".
3. The f^2 test result for the effect of education on employee performance is 0.142. This value is also in the range of 0.02 to 0.15, which indicates that the influence of education on employee performance is "weak".

Table 11
Effect size (f^2)

	f-square
Job Analysis → Employee Performance	0,375
Work Tenure → Employee Performance	0,129
Education → Employee Performance	0,142

Source: Data Processed, 2025

Q-Square

If the Q-Square value is greater than 0 (zero), then the model is considered to have predictive relevance. The Q-Square value obtained in this study is presented in Table 12:

Table 12
Q^2 value

	SSO	SSE	Q^2 (=1-SSE/SSO)
Employee Performance	920,000	666,293	0,276

Source: Data Processed, 2025

The Q^2 value is 0.276, which indicates that the model has predictive ability.

Hypothesis Test Results

Path models in structural modeling should have a significant value that can be evaluated through bootstrapping. The Significant value referred to was evaluated by evaluating the parameter coefficient value and the t-statistic value obtained. The test results are presented in Table 13.

Hypothesis test results presented in Table 13 may be explained as follows:

1. Job Analysis on Employee Performance has an estimated value of 0.457. The t-statistic value is 4.123, and the p-value is 0.000. This result reflects that job analysis has a significant influence on employee performance at PLTU Asam-Asam. A good job analysis helps employees to have a better understanding of their work expectations, which in turn allows them to work more effectively and efficiently. In addition, a well-structured job analysis will also help companies to determine the criteria for selection, training, and development of employees that are more in line with the organization's needs. Therefore, companies need to strengthen their job evaluation systems and ensure that their recruitment and promotion processes are based on objective and measured job analysis results.
2. The influence of work tenure on employee performance obtained an estimated value of 0.271. The t-statistic obtained is 3.169 with a p-value of 0.000, which indicates that work tenure has a significant influence on employee performance at PLTU Asam-Asam. Employees with longer work tenure tend to have a better understanding of the work system and organizational culture, but without appropriate training, they may feel stagnation in their career development. Therefore, companies need to balance work experience with training and skills development programs to keep employees motivated, productive, and capable of keeping up with technological changes and job demands that are continuously evolving.
3. The influence of education on employee performance has an estimated value of 0.284. The t-statistic is 2.430 with a p-value of 0.000, which indicates that education has a significant influence on employee performance at PLTU Asam-Asam. However, despite its significant influence, it is important to realize that education alone is not enough without the appropriate skills that match job competencies in the company. Therefore, companies need to provide suitable training programs related to industry needs and also encourage employees to continue developing their competencies through continuing education, such as professional certifications, technology-based training, and leadership development programs, to ensure that the knowledge gained can be effectively implemented in the work environment.

Table 13
Hypothesis testing results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
JA → EP	0,457	0,458	0,060	4.123	0,000
WT → EP	0,271	0,277	0,055	3.169	0,000
E → EP	0,284	0,285	0,063	2.430	0,000

Note: E: Education, JA: Job Analysis, WT: Work Tenure, EP: Employee Performance
Source: Data Processed, 2025

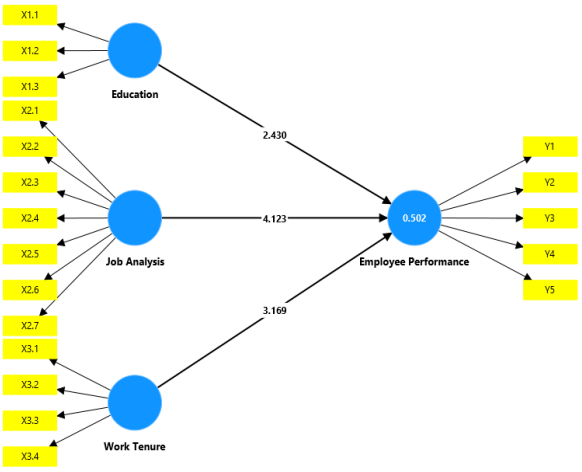

Figure 3. Structural model output
Source: Data Processed, 2025

Indirect Effect

Table 14
Indirect effect

	Path Coefficient	T-values	P-values
E x JA x WT → EP	0.198	2.011	0.044

Note: E: Education, JA: Job Analysis, WT: Work Tenure, EP: Employee Performance
Source: Data Processed, 2025

Table 14 shows the coefficient value is 0.198, where the t-values are 2.011> 1.97 and p-values are 0.044 < 0.05. These results indicate that Education, Job Analysis, and Work Tenure have a positive and significant impact on Employee Performance.

Discussion

Education Affects Employee Performance to Fill Structural Positions at PLTU Asam-Asam

Education is a factor that helps employees to gain a better understanding of their duties and responsibilities, enhances work efficiency, and provides the necessary skills to achieve targets. Research results found that education affects employee performance, which means that if the education level matches the position possessed, it contributes to improving employee performance, or it can be interpreted that employees will become more confident and feel more competent in carrying out their duties when the formal education they have matches the position they hold. Thus, it can be concluded that education not only acts as a supporting factor but also as a key element in improving employee performance, especially for structural positions at PLTU Asam-Asam.

The results of this study are aligned with (Basyit et al., 2020), which discovered that higher levels of education possessed by employees, higher ability, and quality possessed to achieve better positions and careers. Contrast with (Hamzali, 2024) who found that the level of education of employees does not affect performance because many companies already set educational qualification requirements to be able to join as employees.

Job Analysis Affects Employee Performance for Filling Structural Positions at PLTU Asam-Asam

There is a significantly positive influence between Job Analysis and Employee Performance, which indicates that the preparation and evaluation of appropriate job analysis may increase both effectiveness and efficiency of employee performance, which eventually leads to a positive impact on overall work productivity. Factors that can influence, such as proper equipment and technology, make it easier to carry out tasks, and also increase employee motivation and comfort at work. Therefore, good management of work facilities should be a company priority to ensure employee productivity remains optimal.

This study is in line with research (Ismadinah et al., 2020) which states that leaders in a company should provide detailed methods of carrying out tasks in order to create a more optimal and efficient work path. Meanwhile, (Rusly et al., 2022) has discovered opposite results, which were caused by the perceptions of employees who considered that the placement of employee positions was not fully based on job analysis, but was influenced by other factors.

Work Tenure Affects Employee Performance for Filling Structural Positions at PLTU Asam-Asam

Work Tenure significantly affects Employee Performance; the longer the tenure of an employee, the greater the influence on improving performance. These findings support a theory that longer work experience gives employees the opportunity to understand their tasks better, increase efficiency, and adjust to the work environment optimally. A longer tenure allows employees to explore the necessary skills better and build positive working relationships with colleagues and superiors, which in turn contributes to improved overall performance. However, factors such as work stress can reduce performance and do not recognize whether long or short the work tenure, so an effective stress management strategy is needed, such as providing time management training, improving work support facilities, and implementing employee welfare policies to create a more conducive work environment and support sustainable productivity. Research results are

in line with (Jayanti & Dewi, 2021) research which shows that the longer employee work tenure produces high performance results, as evidenced in this study.

Education, Job Analysis, and Work Tenure Affect Employee Performance to Fill Structural Positions at PLTU Asam-Asam

The combination of Education, Job Analysis, and Tenure factors can significantly increase employee performance. It indicates that the higher the educational background, the better the job analysis, and also the longer the employee's tenure, the more likely their performance will improve. Proper education provides the necessary knowledge and skills, good work analysis ensures tasks are managed efficiently, while a longer tenure allows employees to adjust to the job and work environment more optimally. Therefore, organizations need to ensure that the work standards set are achieved constantly.

Conclusions and Implications

This research found that education, job analysis, and tenure have a significant influence on employee performance in filling structural positions at PLTU Asam Asam. The combination of Education, Job Analysis, and Tenure factors is interrelated and may work together to ensure that employees who fill structural positions have appropriate competencies, adequate experience, and a deep understanding of their duties and responsibilities.

Theoretically, this study contributes to the development of HRM theory, particularly in relation to how education, job analysis, and work tenure affect employee performance in the context of filling structural positions. The results of this study strengthen the consideration that these three variables have an important role in improving employee performance. Therefore, it can be extended into broader theories regarding how competence and experience affect organizational effectiveness.

Practically, this research provides implications for HR management policy in companies, especially in terms of filling structural positions. Organizations should pay more attention to the connection between education, experience, and job analysis when choosing and promoting employees. The application of a more in-depth job analysis-based approach can help organizations ensure that employees promoted to structural positions have the appropriate competencies.

Practically, the findings of this study provide concrete guidance for organizational leaders and HR managers in the energy sector. First, the company could design competency-based training programs that are directly tailored to the requirements of structural positions. Second, the results support the development of a merit-based promotion system that considers not only tenure but also job analysis and educational relevance, thereby reducing the risk of mismatches between employees' competencies and positions. Third, the study emphasizes the need for continuous evaluation of job descriptions and specifications to ensure alignment with technological and organizational changes. These contributions are expected to help managers formulate more objective, transparent, and performance-oriented HR policies.

Limitations

This research was conducted only at PLTU Asam-Asam, which implies the results of this research are limited to the conditions and characteristics of the organization. These conditions make the findings obtained not fully applicable to other organizations, especially in organizations with different industries or organizational cultures. Generalization of the results of this study to other organizations needs to be done with caution.

Recommendations

Future studies are recommended to broaden the scope by involving other organizations, either within the energy sector or across different industries, in order to compare how education, job analysis, and tenure influence employee performance in varied settings. Such an approach would offer a more complete understanding of how these factors are applied in different organizational contexts.

This study used a quantitative approach with a questionnaire as the main instrument, which limited the research results to quantitative analysis. Therefore, future researchers are advised to consider a combination of quantitative and qualitative approaches to explore deeper employee perspectives and experiences related to the factors that influence their performance in structural positions.

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