

## **The Role Of Job Rotation And Training On Competence With Job Satisfaction As Mediation**

### **Pengaruh Rotasi Dan Pelatihan Dalam Meningkatkan Kompetensi Karyawan Dengan Kepuasan Kerja Sebagai Mediasi**

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#### **ABSTRACT**

*This study aims to examine and analyse the effect of job rotation and training on employee competence, with job satisfaction serving as a mediator. This study employs a quantitative approach with a population of 35 employees at PT Ababil Widjaya Lestari, which is also used as a sample, utilising a saturated sampling technique. Data collection was conducted using a questionnaire with a 1-5 Likert scale. Data analysis employed the Partial Least Squares Structural Equation Modelling (PLS-SEM) method, utilising the SmartPLS software. The results showed that job rotation had a positive and significant effect on employee competence. Conversely, training did not have a positive and significant effect. Furthermore, job satisfaction was also unable to mediate the effect of job rotation and training on employee competence. These findings indicate that competence in the construction sector is more influenced by direct work experience through job rotation than by training programs.*

**Keywords:** Job rotation, Training, Job satisfaction, Competence, Construction.

#### **ABSTRAK**

Studi ini bertujuan untuk meneliti dan menganalisis pengaruh rotasi kerja dan pelatihan terhadap kompetensi karyawan, dengan kepuasan kerja sebagai mediator. Studi ini menggunakan pendekatan kuantitatif dengan populasi 35 karyawan di PT Ababil Widjaya Lestari, yang juga digunakan sebagai sampel, dengan menggunakan teknik sampling jenuh. Pengumpulan data dilakukan menggunakan kuesioner dengan skala Likert 1-5. Analisis data menggunakan metode Partial Least Squares Structural Equation Modelling (PLS-SEM), dengan menggunakan perangkat lunak SmartPLS. Hasil penelitian menunjukkan bahwa rotasi kerja memiliki pengaruh positif dan signifikan terhadap kompetensi karyawan. Sebaliknya, pelatihan tidak memiliki pengaruh positif dan signifikan. Lebih lanjut, kepuasan kerja juga tidak mampu memediasi pengaruh rotasi kerja dan pelatihan terhadap kompetensi karyawan. Temuan ini menunjukkan bahwa kompetensi di sektor konstruksi lebih dipengaruhi oleh pengalaman kerja langsung melalui rotasi kerja daripada program pelatihan.

**Kata kunci:** Rotasi kerja, Pelatihan, Kepuasan kerja, Kompetensi, Konstruksi.

#### **1. Introduction**

Human resources play a crucial role in organisations, as they support companies in achieving their objectives Luther Gulick, (2019). However, the problem is that not all employees have the same competencies. Therefore, companies need effective management so that each individual can be assigned according to their competencies. This will increase employee productivity. Every company undoubtedly seeks to improve its performance, but this cannot be achieved if the responsibility is solely placed on the leaders. Therefore, human resources play a crucial role in achieving this goal. Companies must pay attention to the factors that can improve employee competencies. In this case, leaders play a crucial role in developing policies that can enhance employee competencies Rohmah, (2020). This is because human resources and employees are company assets who design and also act within the company (Budiyanto et al., 2016).

The construction sector in Indonesia faces serious challenges related to the availability of a competent workforce, particularly in housing development projects. Data reveals that approximately 60% of the construction workforce lacks adequate skills certification. This situation presents a unique dynamic for construction services corporations in realizing product quality improvements through optimized personnel management. Therefore, strengthening individual capabilities through skills enrichment programs and periodic placements is a priority to maintain business continuity and strengthen competitive position amidst increasingly intense competition in the infrastructure sector (Ministry of Public Works and Public Housing, 2023). The construction company, particularly in housing development, faces complex challenges such as cost control (land acquisitions, customer payments), and employee competency. Therefore, the company has implemented several rotations and training programs to improve employee competency. Therefore, human resource management is a key factor in determining a company's success and sustainability. Therefore, the competency of each employee must be continuously improved to address challenges such as the shortage of competent workers.

Referring to the Human Capital Theory proposed by Becker (1964), investing in people (through training, competency development, and work experience, such as rotation) will improve psychological well-being, which leads to job satisfaction. Competency is the basis for ensuring that every work activity runs according to the company's expectations, both in terms of quality, time, and resource utilisation. Competency is one of the key factors influencing employee performance Widodo & Yandi, (2022). To improve employee performance, companies need to develop employee competencies by implementing planned and systematic strategies. Two of these strategies are job rotation and training. Job rotation is a strategy that involves moving employees from one position to another within a specific period of time. The following strategy is employee training, which is essential for employees to perform their jobs and professions effectively Amalia et al., (2024). In addition to having an impact on competency improvement, job rotation and training also play a role in increasing job satisfaction. According to Steve M. Jex (2002) and Post & Areros, (2021), Mitasari et al., (2023) job satisfaction is defined as the pleasant feelings and emotions an employee experiences toward their work and work situation. From this definition, job satisfaction is the positive attitude an employee holds toward their work and everything they encounter in their job.

The implementation of proper job rotation not only makes employees more satisfied with their work but also boosts their morale and performance in carrying out their duties. According to Sulistiowati et al., (2015), job rotation is implemented to create a new atmosphere, which is beneficial for gaining experience and preventing boredom in other fields, thereby enhancing employee performance. In addition to improving performance, job rotation also provides employees with the opportunity to broaden their work experience across various fields Barkah et al., (2024), work experience has a significant influence on employee performance, as employees with extensive work experience tend to be more adaptable to changing situations. This is the basis for implementing job rotation. If employees perform monotonous tasks continuously, it can lead to a decline in performance. However, research Lambey et al., (2017) indicates that job rotation does not have a significant effect on employee competence. Efforts to enhance competencies can also be made through training. Training enhances knowledge and skills, and as a result, employee competencies also improve Amalia et al., (2024). Training also ensures that employees can work effectively and efficiently. This aligns with Berek et al., (2023), which explains that training is the process of imparting knowledge and skills to support task performance. The increase in competency gained from training and job rotation not only impacts performance but also job satisfaction. Training can increase motivation, encouraging employees to put more effort into their work Qonita et al.,

(2023). Meanwhile, job rotation helps reduce boredom caused by monotonous work. By providing a variety of tasks and responsibilities, job rotation increases engagement and job satisfaction (Sulistiowati et al., 2015).

Although various studies have examined the effects of rotation and training on employee performance, gaps remain in research, particularly regarding the role of job satisfaction as a mediating variable. Previous studies have mainly discussed the effects of job rotation or training separately (Amalia et al., 2024; Sulistiowati et al., 2015). However, research on training with job satisfaction as a mediating variable remains limited, especially in the construction sector, which has dynamic and high-pressure job characteristics. Based on this explanation, the purpose of this study is to analyse the effect of job rotation on employee competency; to analyze the effect of training on employee competency; to analyze the role of job satisfaction as a mediating variable in the effect of job rotation on employee competency; and to analyze the role of job satisfaction as a mediating variable in the effect of training on employee competency.

## Literature Review

### A. The Influence of Job Rotation on Competence

Job rotation is one method that can be used to improve employee competence and professionalism. By using the job rotation method, employees will have the opportunity to learn about other areas within the organization. With this opportunity, employees will gain a wealth of experience and new knowledge, such as changes in technology. This will improve the competence of these employees. This is in line with Hariandja and Effendi (2005:157) in (Jain, 2004). Job rotation is the process of moving positions horizontally within a job with the aim of overcoming boredom at work and increasing employee knowledge and expertise.

Irfan & Putra (2021), stated that the indicators of job rotation are as follows: 1) Experience, 2) Work performance, 3) Needs, 4) Responsibility, 5) Knowledge. Research conducted by (Barkah et al., 2024) shows that job rotation and employee performance are related. Employee performance will increase if the competencies possessed by the employee are also high. The results of the study show that job rotation has a positive and significant effect on employee performance. If employee performance increases, competencies will also increase, which is in line with the research (Bukhari & Pasaribu, 2019)

### B. The Relationship Between Training and Competence

Training is a process carried out to improve employees' knowledge, skills, and work attitudes in order to achieve organizational goals effectively. In the context of human resource development, training plays an important role in shaping and improving individual competencies. This is supported by Mangkunegara (2017), who states that training is a learning process that aims to improve a person's work skills and knowledge so that they can perform their jobs better. Meanwhile, competency is the ability to perform or carry out work and tasks based on skills and knowledge and supported by the work attitude required by the job, Afrian et al. in (Susanto et al., 2021).

Wahyuningsih (2018), stated the indicators that can be used to measure training are as follows: 1) Training Objectives, 2) Material, 3) Methods used, 4) Participant qualifications, 5) Trainer qualifications. According to Mokhtar & Susilo (2017), training also has a significant effect on improving employee competence. Thus, training that is designed and implemented appropriately will have a positive impact on improving work competencies.

### C. Job Satisfaction Mediates the Relationship Between Rotation and Employee Competence

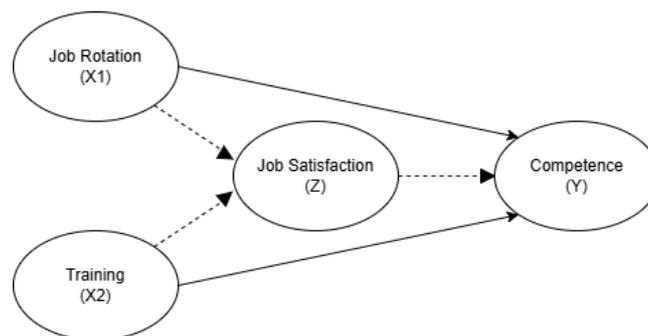
Job rotation gives employees the opportunity to explore various functions and responsibilities within the organization, which inherently expands their knowledge and

skills. More than just technical improvement, job rotation also plays a role in reducing boredom and monotony, which in turn creates job satisfaction. According to Sastrohadiwiryono (2005), the goal of job rotation is for employees to achieve deep job satisfaction, which then encourages maximum performance. The study Adilla, (2022) further confirms that job rotation has a positive and significant effect on job satisfaction. Therefore, when employees are satisfied with their work, they tend to be more motivated and proactive in developing their competencies. In other words, job satisfaction acts as a bridge connecting job rotation with the improvement of employee competencies. According to Robbins and Judge, there are several indicators for measuring job satisfaction, as follows: 1) Salary, 2) The job itself, 3) Managerial ability, 4) Promotion, 5) Work environment.

#### D. Job Satisfaction Mediates the Relationship between Training and Employee Competency

Training is a crucial tool for improving employee competence, as explained by Mangkunegara, (2017), which states that training aims to improve a person's work skills and knowledge. Mokhtar & Susilo, (2017) also found that training has a significant impact on competency. However, the impact of training is not limited to technical aspects; it also affects employees' psychological aspects, particularly job satisfaction. When training is considered relevant and beneficial, employees feel valued by the organization, which ultimately fosters job satisfaction, as stated by Kasmir in Syafe, (2021). Choo, Lin, & Zhao (2025) also support this view, stating that general training can increase motivation, which contributes to job satisfaction. Wibowo, (2010) adds that competence is an integral part of performance, and increased job satisfaction will also increase competence. According to Edison et al in (Soetrisno & Gilang, 2018), the indicators that explain competence are as follows: 1) Knowledge, 2) Skills, 3) Attitude.

Suwanto, (2023) found that job satisfaction has a positive and significant effect on employee performance, including their competence. Thus, job satisfaction acts as a mediator, linking training with improvements in employee competence. Training that is perceived as positive will increase job satisfaction, and this satisfaction will in turn encourage competence development.



H1 : Job Rotation Affects Competence

H2 : Training Influences Competence

H3 : Job satisfaction mediates job rotation on competency improvement

H4 : Job satisfaction mediates training on competency improvement

## 2. Research Methods

To determine the sample, the researcher uses a saturated sampling (census) technique. This means the entire population serves as the research sample. The sample in this study was taken using a total sampling technique, which involves sampling all members of the population

because the population size is less than 100 people (Fadzilasani & Ekowati., 2025). By including all members of the population, the study reduces sampling bias and ensures that the data accurately reflect the organizational condition. Therefore, the sample for this study consists of 35 employees.

Next, the researchers used a questionnaire that was distributed to all employees. The total number of questionnaires returned was 35, so the sample size remained at 35 employees. The Likert scale used by the researchers had five categories: 1) Strongly disagree (SD) with a score of 1, 2) Disagree (D) with a score of 2, 3) Neutral (N) with a score of 3, 4) Agree (A) with a score of 4, and 5) Strongly agree (SA) with a score of 5. This research was processed using SmartPLS software with SEM PLS data analysis techniques. SEM-PLS is an analytical method that is not based on many assumptions; besides that, SEM-PLS can also be used as a tool to confirm the research framework. SEM-PLS can explain the relationship between latent variables to be studied. SEM-PLS can also analyse constructs formed with reflective and formative indicators (Hasibuan et al., 2025). Outer Model and Inner Model are two models used in the PLS calculation stage.

### 3. Results And Discussion

#### Respondents identities and gender

**Table 1. Gender and Division of Respondents**

Devision							Gender of respondents	
Finance	Marketing	Tax	Legal	Civil	Facilities	Project	Women	Men
29%	37%	6%	9%	3%	6%	11%	57%	43%

This study involved all employees in the research object. The study then presented the divisions and gender, as mentioned in Table 1. Based on Table 1 above, it can be seen that 29% of respondents worked in the finance division, 37% in marketing, 6% in taxation, 9% in legal, 3% in civil, 6% in infrastructure, and 11% in projects. Based on these results, the majority of respondents came from the marketing division. Furthermore, Table 1 also shows that 57% of respondents were female, while 43% were male. This indicates that there were more female respondents than male respondents in this study.

#### Validity testing

According to Sugiyono, (2013), validity testing is used to assess the validity of research instruments. A research instrument is considered valid if it can be used to measure what it is supposed to measure. Testing uses a factor loading value of greater than 0.7. The results of the validity test are as follows:

**Table 2. validity test results**

Variable	Item	Factor Loading	Information
Job Rotation (X1)	RK1	0.766	Valid
	RK2	0.717	Valid
	RK3	0.720	Valid
	RK4	0.733	Valid
	RK5	0.757	Valid
	RK6	0.765	Valid
	RK7	0.816	Valid
	RK8	0.757	Valid
	RK10	0.811	Valid
	RK11	0.790	Valid

	RK12	0.722	Valid
Training (X2)	P1	0.808	Valid
	P2	0.743	Valid
	P4	0.743	Valid
	P5	0.744	Valid
	P6	0.718	Valid
	P7	0.705	Valid
	P8	0.749	Valid
	P9	0.752	Valid
	P10	0.742	Valid
	P11	0.746	Valid
	Job Satisfaction (Z)	KK1	0.717
KK3		0.812	Valid
KK4		0.806	Valid
KK5		0.789	Valid
KK6		0.753	Valid
KK7		0.777	Valid
KK8		0.822	Valid
Competency (Y)		K1	0.805
	K2	0.799	Valid
	K3	0.795	Valid
	K4	0.778	Valid
	K6	0.727	Valid

Based on the validity test results in the table, initially, several items had factor loadings of less than 0.7. Therefore, to overcome this, the researcher removed several items with values of less than 0.7. After the deletion, the results were in accordance with the table, namely, all items had a factor loading of 0.7. This indicates that the indicators measuring job rotation, training, job satisfaction, and competence had a value greater than 0.7. Thus, the four variables were considered valid.

### Reliability Testing

According to Sugiyono, (2013), reliability testing is mandatory for research instruments. Reliability testing is conducted to determine whether the results remain consistent when measured twice. A construct is considered reliable if the composite reliability and Cronbach's alpha values are greater than 0,7.

**Table 3. Reliability Test**

Variabel	Cronbach's Alpha	Composite Reliability	AVE	Information
Job Satisfaction (Z)	0.894	0.894	0.613	Reliabel
Competence (Y)	0.840	0.840	0.611	Reliabel
Training (X1)	0.911	0.912	0.556	Reliabel
Job Rotation (X2)	0.927	0.928	0.578	Reliabel

Table 4 illustrates the Cronbach's Alpha and composite reliability analysis of all variables. If those two criteria have values greater than 0.7, the measurement model is reliable. The AVE values greater than 0.5. After the outer model testing is completed, the next step is to perform structural model testing.

**Inner model analysis**

**Table 4 R-Square Values**

Variable	R Square	Adjusted R Square
Job Satisfaction	0.838	0.828
Competence	0.779	0.757

Table 4 shows the results of the coefficient of determination (R Square) test, which indicates that the R Square for job satisfaction (Z) is 0.838, while the adjusted R Square is 0.828. This indicates that the independent variable can account for 84% of the variation in job satisfaction (Y), with the remaining 16% attributed to other factors. Meanwhile, the R Square value for Competence (Y) is 0.779, while the Adjusted R Square value is 0.757. This indicates that the independent variable can account for 78% of the variation in Job Satisfaction (Y). Other factors influence the remaining 22%. The slightly lower Adjusted R Square value indicates an adjustment to the number of predictors in the model and remains in the moderate to strong category. Overall, these results suggest that the structural model employed has sufficient predictive power in explaining the Employee Performance variable.

**Hypothesis Testing of Direct Influence**

**The Effect of Job Rotation on Competency Improvement**

**Table 5. Results of direct effect hypothesis testing**

Relationship Between Variables	Original Sample (O)	T-Statistics	P-values	Description
Training -> Competency	0.112	0.322	0.747	Not Significant
Job Rotation -> Competence	0.530	2.052	0.041	Significant

Based on the test results, job rotation has a positive and significant effect on competence. This is demonstrated by the data from the direct effect test, which yielded a t-statistic value of 2.052, exceeding the 1.96 threshold. This test also produced a p-value of 0.041, which is less than 0.05. Therefore, job rotation affects competence. Thus, hypothesis H1, which states that job rotation has a positive and significant effect on competency improvement, is accepted. Job rotation significantly impacts employee competency, due to the experiential learning process and skill diversification in the construction sector. Therefore, someone with more experience will improve their competency. Based on the results of this research test, the findings align with Barkah et al., (2024), who state that job rotation is positively related to employee performance. Employee performance improves when the employee's competence increases. This is also reinforced by Arini et al., (2020), who state that job rotation provides employees with opportunities to understand various types of work within the same position. This is because it will enhance their ability to adapt and comprehend various fields of study. However, this study contradicts the results of research by Lambey et al., (2017), which state that job rotation has no significant effect on employee competence.

**The Effect of Training on Competency Improvement**

Table 5 shows that training does not affect competence. This can be seen from the results of the internal model test, where the t-statistic value is only 0.322, which is smaller than 1.96, and the p-value is 0.747, which is greater than 0.05. Thus, training does not affect employee competence. Thus, hypothesis H2, which states that training has a positive and significant effect on competency improvement, is rejected. The results of the study revealed that training did not significantly influence competency because the training program was not aligned with current job needs, on the one hand the training results had not been fully

implemented in work practices. The situation in the field aligns with the results of previous studies Septiyana, (2022), which suggest that training does not affect competency, resulting in no improvement in employee performance. This is also reinforced by Aditya et al., (2015), which states that training improves and strives to perfect the talents, skills, abilities, and expertise of employees. This may occur because the training is not relevant to the core competencies required by the company or the tasks performed by employees daily, or because the training results are not consistently applied in the field. Hermansyah, (2025) also states that training will only have a significant impact when it is relevant to work needs and is applied in practice after the training is conducted.

### Job satisfaction mediates the effect of training on competency improvement

**Table 6. Results of indirect hypothesis testing**

Relationship between variables	Original Sample (O)	T-Statistics	P-values	Description
Training -> Job Satisfaction -> Competence	0.223	0.888	0.375	Not Significant
Job Rotation -> Job Satisfaction -> Competence	0.032	0.355	0.723	Not Significant

The results of this study suggest that job satisfaction does not mediate the relationship between training and competency. This is evident in the original sample value of 0.223, the t-statistic of 0.888, and the p-value of 0.375. Thus, this study suggests that although structured training has not had a direct impact on increasing job satisfaction, it does not provide a mediating effect on competence. Therefore, training does not affect employee competence. Thus, hypothesis H3, which states that training has a positive and significant effect on increasing competency, is rejected. Theoretically, what happens in the field contradicts Mangkuprawira, (2011) statement, which posits that training equips employees to work according to standards. One of the reasons for the study's insignificance is that the work in this company tends to be routine and target-oriented, so that job satisfaction is based more on external factors related to work conditions than on internal factors, such as training. This is reinforced by Ramadhan & Faisol, (2024), which explains that job satisfaction plays a greater role in shaping employee attitudes and work behaviour, so that an increase in job satisfaction does not always have a direct impact on an increase in technical competence. Additionally, training is not a primary emotional factor and therefore does not contribute to job satisfaction Winarno, (2023). This finding is also consistent with Vonny, (2016), who states that training does not significantly influence job satisfaction.

### Job satisfaction mediates the effect of training on improvements in competency.

Table 6 presents the statistical test results, which indicate that the original sample value, reflecting the influence of job satisfaction in mediating the relationship between job rotation and competency, is 0.032, with a t-statistic value of 0.355 and a p-value of 0.723. Thus, job satisfaction is not able to mediate the effect of job rotation on competency. Although job rotation has a direct effect on competency, it does not necessarily make employees feel satisfied. Thus, hypothesis H4, which states that job rotation has a positive and significant effect on competency improvement, is rejected. This insignificance may be because direct work processes and repetitive tasks have a greater impact on increasing competence.

Meanwhile, job satisfaction does not always increase with transfer, as it often requires employees to adjust to a new environment, new colleagues, and different tasks. During this adaptation process, some employees may experience discomfort, role anxiety, or additional burdens. Therefore, job satisfaction tends to have a more direct influence on competency, but

it cannot influence job satisfaction, resulting in failed mediation (Adilla, 2022).

#### 4. Conclusion

This study concludes that job rotation has a significant effect on employee competence, while training has no significant effect on competence. In addition, job satisfaction does not mediate the relationship between job rotation and training on employee competence. Thus, these findings indicate that competence improvement is more influenced by work experience through job rotation than by training programs. The implications of this study emphasise the importance of optimising job rotation as a strategy for competency development, as well as evaluating and controlling training programs to ensure they align with job requirements.

The limitations of this study include a relatively small sample size of 35 respondents and its focus on a single construction company. Therefore, the study's results cannot be broadly generalised to the construction sector or other industrial sectors. The cross-sectional research design has been unable to capture long-term changes in employee competency and job satisfaction, especially after the implementation of continuous job rotation and training.

#### suggestion

for further research include expanding the sample size and involving more than one company, both in the construction sector and other sectors, to enhance the generalizability of the research results. Future research can employ a longitudinal design to examine the long-term effects of job rotation and training on job satisfaction and competency, thereby providing a more accurate assessment of the effectiveness of human resource development strategies over a specified period.

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