

# The Effect Of Training And Competence On The Performance Of Laboratory Assistant Through Job Satisfaction As Intervening Variable

Ken Melati Mundingsari, Raden Andi Sularso, Arnis Budi Susanto

**Abstract** – This study aims to determine the effect of training and competence on the performance of laboratory assistant (PLP) in Jember University through job satisfaction as an intervening variable. This research is an explanatory quantitative study with a total sample of 57 people and the method of data analysis using PLS (Partial Least Square). The results of the study are that training has a negative and not significant effect on the performance of laboratory assistant, competence has a positive and significant effect on the performance of laboratory assistant, training has a positive and not significant effect on job satisfaction of laboratory assistant, competence has a positive and significant effect on job satisfaction of laboratory assistant and job satisfaction has a positive and not significant effect on the performance of laboratory assistant.

**Index Terms** – Competence, Job satisfaction, Performance, Training

## 1 INTRODUCTION

Human resource is one of the organizational resources that has an important role in achieving its goals. To support and realize organizational goals, human resources that have good performance and quality are needed. Performance is the result of quality and quantity of work achieved by an employee in carrying out their duties in accordance with the responsibilities given to him (Mangkunegara, 2006: 9). Basically, the performance of a person is individual because each employee has a different level of ability (Chaeril et al., 2018).

One of the factors that influence employee performance is training. Training has an important role for organizations in improving employee performance for organizational growth and success. In general, training refers to planned efforts to facilitate employee learning about work-related knowledge, skills and behaviors (Noe et al., 2013: 351). Various studies on training on employee performance have obtained different results. In a study conducted by Ataunur and Ariyanto (2015) proved that training had a positive and significant effect on employee performance. It is different from research conducted by Kusmaningtyas (2011) which proves that training has a negative and not significant effect on employee performance. This result is due to the training is not compatible with the employee's occupation and organization's needs. The research shows that there is a research gap regarding the effect of training on employee performance, so that the study of employee training and performance is interesting to study.

Another factor that can affect employee performance is competence. Competence is a basic characteristic of

someone who indicates how to think, behave and act, and draw conclusions that can be done and maintained by someone at a certain period of time (Moeheriono, 2012: 5). Wijayanto and Dotulong (2017) have proven that competence has a positive and significant effect on employee performance. Whereas in Supiyanto's study (2015), competence has no significant effect on employee performance. This is because changes in human resource competencies do not affect employee performance.

Job satisfaction is a factor that also affects employee performance. According to Utomo (2002) in Putrana et al. (2016), job satisfaction affects performance, meaning that one's performance will increase when individual job satisfaction is in a high position. Research conducted by Indrawati (2013) proves that job satisfaction has a positive and significant effect on employee performance. However, Arianto's research (2017) proves that job satisfaction does not significantly influence employee performance. This means that the higher or lower job satisfaction that occurs, will not affect employee performance. Arianto's research (2017) shows that there is a research gap regarding the effect of job satisfaction on employee performance.

One of the factors that influence job satisfaction is competency. Kurniawan (2017) proved that competence has a positive and significant effect on job satisfaction. The same result was also proved by Supiyanto (2015) that competence had a positive and significant effect on employee job satisfaction. Therefore, if employee competency is high then employee job satisfaction is also high and vice versa. If employee competency is low then employee job satisfaction is also low.

Another factor that also affects job satisfaction is training. This was stated by Supatmi et al. (2013) where training has a positive effect on job satisfaction. According to Basir and Wahjono (2014) the effectiveness of employee performance after training must go through the achievement of job satisfaction first. However, different results obtained by Pareraway et al. (2018) which proves that training has no

- Ken Melati Mundingsari is student in Magister management Program in University of Jember, Indonesia, Email: [kenmelati@unej.ac.id](mailto:kenmelati@unej.ac.id)
- Raden Andi Sularso is lecturer in University of Jember, Indonesia, Email: [manajemen1234@yahoo.com](mailto:manajemen1234@yahoo.com)
- Arnis Budi Susanto is lecturer in University of Jember, Indonesia, Email: [arnis.feb@unej.ac.id](mailto:arnis.feb@unej.ac.id)

significant effect on job satisfaction. The results of the study of Pareraway et al. (2018) show a research gap regarding the effect of training on job satisfaction.

In civil service employee management, employees in special criteria that have been processed and assigned to certain functional positions and use a career basis with credit score assessments and have the duties, responsibilities, and authority to carry out the management of educational laboratories are called Laboratory Assistant (PLP). The main tasks of laboratory assistant are designing laboratory activities, operating equipment and using materials, maintaining equipment and materials, evaluating laboratory work systems and developing laboratory activities (PERMENPAN dan Reformasi Birokrasi, 2014).

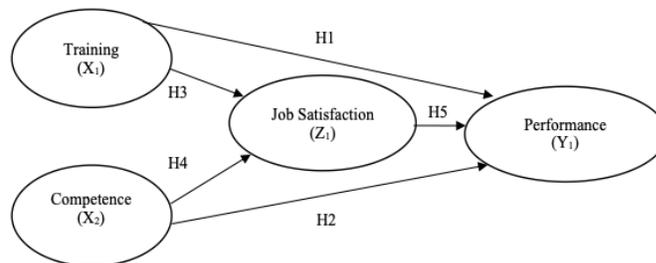
Laboratory assistant which are the object of research are University of Jember laboratory assistant. University of Jember is a tertiary institution located in East Java province and is the most favorite tertiary institution around Besuki Residency. University of Jember has several kinds of laboratories to support the Tri Dharma of higher education. At this time, laboratories at the University of Jember are not merely supporting educational activities but are also the center of the Tri Dharma activities of universities both for research and community service for the internal and external of University of Jember laboratory assistant must do the three things in accordance with the duties of laboratory assistant listed in PERMENPAN dan Reformasi Birokrasi (2014) in order to meet their credit scores in the determination of rank, rank and class of space.

The laboratory can function optimally if management is carried out professionally. Laboratory assistant are not only required to be able to carry out their duties and functions in a professional manner in accordance with their competencies, but are also demanded to be able to improve their competencies so that their performance is getting better and quality. The recognition of University of Jember's laboratory assistant as professionals in the laboratory is increasingly apparent. One proof of recognition given to the profession of laboratory assistant is the facilities provided for research activities by budgeting research grant funds for laboratory assistant.

Ministry of technology research and higher education has offered various types of training activities such as Short Term Training for laboratory assistant abroad and training and technical assistance for laboratory assistant functional positions. Several University of Jember's laboratory assistant have been delegated to participate in Short Term Training activities in various countries including the Netherlands, Russia, Thailand and others. For training and technical assistance for laboratory assistant functional positions held by ministry of technology research and higher education, several laboratory assistant from University of Jember also participated in the event. Other training that has been attended by laboratory assistant is training on the operation of laboratory equipment and training on laboratory quality management system standards (SNI ISO / IEC 17025). With the various trainings that have been participated by the Jember University education laboratory institutions, it is expected to be able to improve their performance in the laboratories they manage.

## 2. CONCEPTUAL FRAMEWORK

This study aims to examine the effect of training and competence on the performance of laboratory assistant through job satisfaction as an intervening variable. There are five influences can be explained in the conceptual framework as follows:



## 3. METHODOLOGY

This research is an explanatory quantitative research. The research population was all 57 University of Jember laboratory assistants. The variables studied were training ( $X_1$ ), competence ( $X_2$ ), performance ( $Y_1$ ) and job satisfaction ( $Z_1$ ). The data analysis method used in this study is PLS (Partial Least Square) using the Smart PLS 3.0 application program. This method has its own advantages. It can be used to overcome the problem of relationships between complex variables, but the sample size of the data is small. Data analysis and structural equation modeling use Smart PLS 3.0 software (Ghozali and Latan, 2015).

## 4. RESULTS AND DISCUSSION

### 4.1. Effect of Training on Laboratory assistant Performance

The results of the first hypothesis test (H1) states that training has a negative and not significant effect on the performance of laboratory assistant. The negative effect is indicated by the negative correlation coefficient of -0,108. While the insignificant results are indicated by the t-statistic value of 0,579 smaller than the t-table value of 1,67.

The results of this study explain that the training attended by laboratory assistant did not have an impact on the performance of laboratory assistant. This is due to the training that was followed by laboratory assistant not in accordance with their field of work so the training could not support their work in the laboratory. In addition, the training that was followed did not suit the needs of the place where they worked so the results of the training that followed could not be applied in their work units.

### 4.2. Effect of Competence on Laboratory assistant Performance

In the second hypothesis test result (H2) states that competence has a positive and significant effect on the performance of laboratory assistant. A positive effect is indicated by a positive correlation coefficient of 0,471. Significant results are indicated by the t-statistic value 2,930 greater than the t-table value of 1,67.

The results of this study prove that the higher the

competency of laboratory assistant will make the performance of laboratory assistant better. The dimensions of competency of laboratory assistant such as the characteristics of motives, traits, knowledge, and skills have an effect on improving the performance of laboratory assistant.

Competencies such as the desire to achieve work targets and the ability to control emotions in work make laboratory assistant able to work carefully and complete work on time. With the competencies of laboratory assistant, such as designing laboratory activities, operating equipment and using materials, maintaining equipment and materials, evaluating laboratory work systems, developing laboratory activities, and making laboratories managed by laboratory assistant can function optimally.

#### 4.3. Effect of Training on Laboratory assistant Job Satisfaction

The results of the third hypothesis test (H3) states that training has a positive and not significant effect on job satisfaction of laboratory assistant. A positive effect is indicated by a positive correlation coefficient of 0,061. The insignificant results are indicated by the t-statistic value of 0,421 smaller than the t-table value of 1,67.

The results of this study prove that the training attended by laboratory assistant did not have a significant impact on the level of job satisfaction of laboratory assistant. Dissatisfaction can be caused by boredom in participating in training. This can be caused by the training methods provided are not optimal. Therefore, the training does not give job satisfaction to laboratory assistant.

#### 4.4. Effect of Competence on Laboratory assistant Job Satisfaction

In the fourth hypothesis test result (H4) states that competence has a positive and significant effect on job satisfaction of laboratory assistant. A positive effect is indicated by a positive correlation coefficient of 0.520. Significant results are shown with a t-statistic value of 5.092 greater than the t-table value of 1.67.

The factors that influence job satisfaction of laboratory assistant are the salary earned. With the salary earned suitable with what is done, laboratory assistant is motivated to do their work. In addition, job satisfaction can also be influenced by coworkers. With colleagues who can work together and support each other, the work atmosphere will be more enjoyable. Another factor that also influences is the work environment. A comfortable work environment will make laboratory assistant works eagerly. Hence, the more satisfied the laboratory assistant, the more they will show their competence.

#### 4.5. Effect of Job Satisfaction on Laboratory assistant Performance

The results of the fifth hypothesis test (H5) state that job satisfaction has a positive and not significant effect on the performance of laboratory assistant. The positive effect is shown by the positive correlation coefficient of 0,255. The insignificant result is indicated by the t-statistic value of 1,445 which is smaller than the t-table value of 1,67.

The results of this study explain that changes in job

satisfaction do not affect the performance of laboratory assistant. Dissatisfaction can be caused by the work itself, related to the characteristics and complexity of the job. Laboratory assistant are sometimes burdened with public works that are not their main duty. Consequently, the work does not satisfy them and does not affect their performance as laboratory assistant.

## 5. CONCLUSION

It can be concluded that training has a negative and not significant effect on the performance of laboratory assistant, competence has a positive and significant effect on the performance of laboratory assistant, training has a positive and not significant effect on job satisfaction of laboratory assistant, competence has a positive and significant effect on job satisfaction of laboratory staff education and job satisfaction have a positive and not significant effect on the performance of laboratory assistant.

Based on research that has been done, The results of this study can be used as consideration for developing laboratory assistant, especially in the aspects of training and competence and its effect on job satisfaction and performance of laboratory assistant. For further research, the next research will use different variables and samples of laboratory assistant from various agencies.

## REFERENCES

- [1] Arianto. D, 2017. Effect of Job Satisfaction on Employee Performance through Organizational Citizenship Behavior as an Intervening Variable (Study of Staff PT. Kepuh Kencana Arum Mojokerto). *Jurnal Ilmu Manajemen*. 5(3): 1-9
- [2] Ataunur, I dan Ariyanto, E. 2015. Effect of Competence and Training on Employee Performance PT Adaro Energy TBK. *Jurnal Telaah Bisnis*. 16(2): 135-150.
- [3] Basir. NM dan Wahjono. SI, 2015. The Effectiveness Of Training Towards Job Satisfaction With Job Performance as A Mediating Variable at Agricultural Agency: Evidence From Malaysia. *Balance Economics Bussiness Management and Accounting Journal*. 10(19): 51-62.
- [4] Chaeril, Umar, A., Azis, M.2018. The Effect of Competence, Training and Education on Employee Performance at the Regional Financial Management Agency Office in Bantaeng Regency. *Yume: Journal Of Management* . 1(2): 114-129.
- [5] Citraningtyas. N dan Djastuti. I, 2017. The Effect of Training and Work Environment on Employee Performance with Job Satisfaction as an Intervening Variable (Study of Staff Hotel Megaland Solo). *Diponegoro Journal Of Management*. 6(4): 1-11.
- [6] Ghozali, I dan Latan, H. 2015. Partial Least Squares Concepts, Techniques and Applications Using the SmartPLS 3.0 Program. Semarang:Undip.
- [7] Indrawati, A.D. 2013. Effect of Job Satisfaction on Employee Performance and Customer Satisfaction in Private Hospitals in the City of Denpasar. *Jurnal Manajemen, Strategi Bisnis dan Kewirausahaan*. 7(2): 135-142.
- [8] Kurniawan, Z. 2017. Influence Of Competence, Cultural Organization, And Job Satisfaction Of Career

- Development And Implications On The Performance Of Employees (Survey On State-Owned Enterprises (SOES) In The Region Of Cirebon) International Journal Of Scientific & Technology Research. 6(12): 214-224.
- [9] Kusmaningtyas. A, 2011. The Effect of Training and Work Experience on Competence that Impacts the Performance of Field Forestry Extension Workers in Sampang Regency. *Kajian Manajemen dan Bisnis*. 2(2): 290-304.
- [10] Mangkunegara, A. P. 2006. *Human Resources Performance Evaluation*. Bandung: PT. Refika Aditama
- [11] Moehariono. 2012. *Competency Based Performance Measurement*. Jakarta: PT Raja Grafindo Persada.
- [12] Noe, R.A., Hollenbeck. J.R., Gerhart, B., Wright, P.M. 2013. *Human Resource Management Achieve Competitive Advantage*. Jakarta: Salemba Empat.
- [13] Pareraway et al., 2018. The Effect of Work Environment, Training, and Empowerment of Human Resources on Employee Job Satisfaction PT.PLN (PERSERO) Suluttenggo Region. *Jurnal EMBA*. 6(3):1828-1837.
- [14] Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 145 of 2014. Regarding Technical Instructions for Functional Position of Laboratory assistant and Credit Numbers
- [15] Putrana, Y., Fathoni, A., Warso, M.M. 2016. Effect of Job Satisfaction and Organizational Commitment on Organizational Citizenship Behavior in Improving Employee Performance on PT. Gelora Persada Mediatama Semarang. *Journal Of Management*. 2(2).
- [16] Supatmi, M.E., Nimran, U., Utami, H.N. 2013. Effects of Training, Compensation on Employee Job Satisfaction and Employee Performance. *Jurnal Profit*. 7(1): 25-37.
- [17] Supiyanto. Y. 2015. Effects of Compensation, Competence and Organizational Commitment on Satisfaction and Performance. *Jurnal Economia*. 11(2): 118-131.
- [18] Wijayanto. J dan Dotulong. LOH, 2017. The Effect of Training, Competence and Motivation on Employee Performance at PT. Plasa Multi Krindo Manado. *Jurnal EMBA*. Vol.5 No.2: 3048-3057.