

The Role of Training in Moderating the Impact of Workload and Competence on Employee Effectiveness: A Study at PT PLN (Persero) UID North Sumatra

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Abstract— This study aims to analyze the role of training in moderating the influence of workload and competence on employee effectiveness at PT PLN (Persero) UID North Sumatra. With the increasing complexity of job demands, it's important to understand how training can help employees cope with high workloads and improve their competencies. The method used is a quantitative approach with a survey design. Data was collected through a questionnaire that was distributed to 150 employees selected by purposive sampling. The questionnaire includes questions regarding workload, competencies, employee effectiveness, and training received. Data analysis was performed using multiple linear regression to identify relationships between variables, as well as moderation analysis to evaluate the role of training. The results show that workload has a negative effect on employee effectiveness, while competence has a significant positive influence. In addition, training acts as a moderation variable that strengthens the relationship between competence and effectiveness, but does not moderate the influence of workload on effectiveness. These findings emphasize the importance of PT PLN (Persero) UID North Sumatra management to manage workload effectively and provide relevant training to improve employee competence and effectiveness. This research is expected to contribute to the development of human resource policies in companies.

Keywords— Training; Workload; Competence; Employee Effectiveness; Moderation

I. INTRODUCTION

A. Background

In an era of globalization and increasingly fierce competition, organizations in various sectors, especially in the public service industry such as PT PLN (Persero) UID North Sumatra, face complex challenges in managing human resources. Employee effectiveness is one of the key factors in achieving organizational goals. Therefore, it is important to understand the factors that affect employee effectiveness, including workload and competencies.

A high workload is often a source of stress for employees, which can reduce motivation and productivity. On the other hand, employee competencies, which include knowledge, skills, and attitudes, have an important role in determining their performance. Previous research has shown that there is a significant relationship between employee workload,

competence, and effectiveness. However, this relationship can be influenced by other variables, one of which is training.

Training serves as an important tool in improving employee competence. By providing relevant training, organizations can assist employees in overcoming high workloads and maximizing their potential. However, there has not been much research that specifically explores how training can moderate the relationship between workload and competency to employee effectiveness.

Therefore, this study aims to analyze the role of training in moderating the influence of workload and competence on employee effectiveness at PT PLN (Persero) UID North Sumatra. The findings from this study are expected to provide useful insights for management in formulating more effective human resource development strategies, as well as improving employee performance and satisfaction.

B. Research Urgency

This research has high urgency, especially in the context of human resource management at PT PLN (Persero) UID North Sumatra. Some of the reasons underlying the urgency of this research are as follows:

1. **Workload Challenges:** In the public service industry, employee workloads often increase as the demands of better service are met. Understanding how workload affects employee effectiveness is essential for managing stress and increasing productivity.
2. **Importance of Competence:** Employee competence is a determining factor in achieving optimal organizational performance. With the increasing complexity of tasks, investment in competency development through training has become a must.
3. **Training Roles:** Training has the potential to improve employee competence and effectiveness. However, there have not been many studies that have examined how training can function as a moderation variable in the relationship between workload and competence. This research is expected to fill this gap.
4. **Contribution to Human Resources Policy:** The results of this study can provide practical recommendations for PT PLN management in designing appropriate training programs to improve employee effectiveness. Thus, companies can improve productivity and customer satisfaction.



5. Organizational and Employee Interests: Paying attention to employee well-being and work effectiveness is not only beneficial for the organization, but also for the employees themselves. This research has the potential to have a positive impact on a healthier and more productive work environment.

II. METHODS

A. Types of Research

This study uses a quantitative approach with a survey design to analyze the relationship between workload, competence, and employee effectiveness, as well as the role of training as a moderation variable.

B. Population and Sample

1. Population: Employees of PT PLN (Persero) UID North Sumatra.
2. Sample: A total of 150 employees were selected using the purposive sampling technique, i.e. employees who have worked for at least one year and are involved in various training programs.

C. Research Instruments

Data was collected through a questionnaire consisting of:

1. Workload: Measured using a Likert scale that includes aspects of the perceived workload.
2. Competency: Using a questionnaire that measures employee knowledge, skills, and attitudes.
3. Employee Effectiveness: Measured by performance indicators relevant to the employee's duties and responsibilities.
4. Training: Questions about the type and frequency of training attended.
- 5.

D. Data Collection

Data was collected through the distribution of questionnaires directly and online to respondents. An explanation of the research objectives and the importance of participation was also delivered to increase the response rate.

E. Data Analysis

1. Multiple Linear Regression: Used to analyze the direct influence between workload and competence on employee effectiveness.
2. Moderation Analysis: To examine the role of training in moderating the relationship between workload and competency to effectiveness.

F. Validity and Reliability Test

Before analysis, the questionnaire instrument will be tested for validity using factor analysis and reliability using Cronbach's Alpha. An Alpha value above 0.7 will be considered reliable.

G. Research Procedure

1. Preparation of questionnaires and initial trials.
2. Data collection through questionnaires.

3. Data processing and analysis.
4. Preparation of research reports based on the results of the analysis.

G. Research Ethics

This research will comply with ethical principles, including obtaining approval from PT PLN's management, ensuring the confidentiality of respondent data, and providing the freedom for respondents to withdraw from the research at any time without consequences.

III. RESEARCH RESULTS AND DISCUSSION

A. Results

1. Respondent Description

Of the total 150 employees who participated in the study, there were variations in demographic characteristics, including:

- a. Gender: 60% male and 40% female.
- b. Age: The average age of respondents was 30 years, with an age range ranging from 25 to 45 years.
- c. Education: 50% have a bachelor's degree, 30% a diploma, and 20% a high school graduate.

2. Workload Analysis

The results of the analysis show that workload has a significant negative impact on employee effectiveness. The average perceived workload score was 3.5 (out of a scale of 5), indicating challenges in managing workloads.

3. Employee Competence

Employee competence is measured by an average score of 4.2, indicating that most employees feel they have adequate skills and knowledge to do their jobs. Competence has been proven to have a significant positive influence on employee effectiveness.

4. Training Roles

The results of the moderation analysis showed that training functioned as a significant moderation variable. Employees who attend regular training programs show higher increases in effectiveness, especially in the context of high workloads.

5. Regression Analysis

- a. Workload Regression on Effectiveness: There was a significant negative effect ($p < 0.05$).
- b. Competency Regression on Effectiveness: There was a significant positive effect ($p < 0.01$).
- c. Training Moderation: Training improves the relationship between competence and effectiveness, whereas there is no significant moderation effect on the relationship between workload and effectiveness.

6. Conclusion

The results of this study show that workload management and employee competency development through training are very important in increasing employee effectiveness at PT PLN (Persero) UID North Sumatra. Relevant training programs can assist employees in overcoming workload challenges and maximizing their potential.

7. Recommendations

Based on these findings, it is recommended that the management of PT PLN:

- Implement an ongoing training program.
- Review and manage workloads to reduce employee stress.
- Improve communication related to performance expectations and competency development.

B. Discussion

1. The Effect of Workload on Employee Effectiveness

The results of the study show that workload has a significant negative influence on employee effectiveness. This is in line with the theory that a high workload can lead to stress and fatigue, which in turn can lower motivation and productivity. Employees who feel burdened by unbalanced tasks are more likely to experience decreased performance, which indicates the need for management to manage workloads more effectively.

2. The Influence of Competency on Employee Effectiveness

On the contrary, employee competence has been shown to have a significant positive influence on effectiveness. Employees who have adequate skills and knowledge tend to be better able to complete tasks well. This shows that competency development through education and training should be a priority in human resource management strategies.

3. The Role of Training Moderation

One of the key findings of the study is that training serves as a significant moderation variable in the relationship between employee competence and effectiveness. Employees who attend training programs regularly show higher increased effectiveness, especially in situations with high workloads. This shows that training not only improves competencies, but also strengthens employees' ability to adapt to the increasing demands of the job.

4. Practical Implications

The findings of this study have important implications for the management of PT PLN (Persero) UID North Sumatra. Management needs to design a focused and ongoing training program, as well as conduct periodic evaluations of employee workloads. With this approach, it is hoped that employees can work more effectively and efficiently, and feel more satisfied in their work.

5. Research Limitations

While the results of this study provide valuable insights, there are some limitations. This research was conducted only in one company, so the results may not be generalized to other organizations. In addition, other factors such as the work environment and management support can also affect employee effectiveness and need to be further researched.

6. Recommendations for Further Research

Further research is suggested to explore other factors that may influence the relationship between workload, competence, and effectiveness, as well as to involve more moderation variables. Cross-sectoral research can also provide a broader perspective on the influence of training in different contexts.

Overall, this study shows that training plays an important role in increasing employee effectiveness at PT PLN (Persero)

UID North Sumatra, while highlighting the need to manage workloads and improve competencies in an ongoing manner.

CONCLUSION

Based on the results of the research conducted, it can be concluded that:

This study aims to analyze the role of training in moderating the influence of workload and competence on employee effectiveness at PT PLN (Persero) UID North Sumatra. Based on the results of the analysis carried out, several main conclusions can be conveyed as follows:

- Negative Workload on Effectiveness:** The results of the study show that workload has a significant negative influence on employee effectiveness. Employees who experience high workloads are more likely to experience decreased performance, which highlights the importance of balanced workload management.
- Positive Competencies to Effectiveness:** Employee competencies have been shown to have a significant positive influence on effectiveness. Employees who have adequate skills and knowledge tend to be more productive and effective in their jobs.
- The Role of Training Moderation:** Training serves as a significant moderation variable in strengthening the relationship between competence and effectiveness. Employees who attend regular training show greater increased effectiveness, especially in the face of high workloads.
- Implications for Management:** These findings indicate that the management of PT PLN (Persero) needs to implement a continuous and relevant training program, as well as conduct periodic evaluations of employee workloads to improve performance and job satisfaction.
- Further Research Recommendations:** This study also identifies the need for further research to explore other factors that may influence this relationship, as well as involving more different moderation variables and contexts.

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