EFFECT OF WORK ENVIRONMENT ON LECTURER PERFORMANCE MEDIATED BY WORK MOTIVATION AND JOB SATISFACTION

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Abstract: This research aims to examine and analyze the direct effect of the work environment on lecturer performance and indirect effect of work environment on lecturer performance through work motivation and job satisfaction in State Polytechnic of Malang. The population of this research is all lecturers State Polytechnic of Malang with civil servant status (PNS) amounted to 314 people with 256 respondents. Data were obtained by using questionnaire. Partial Least Square (PLS) is used to analyze and test the hypothesis that followed by online Sobel test to test the variables of work motivation and job satisfaction as mediation. This study shows that there is a positive and significant effect of the work environment on lecturer performance, work environment on work motivation, work motivation on lecturer performance, work environment on job satisfaction. However, job satisfaction has no significant effect on lecturer’s performance. The result of mediation testing, work motivation mediate the effect of the work environment partially to lecturer performance, and job satisfaction hasn’t a role as a mediation on the effect of the work environment to lecturer performance.

Keywords: Work Environment, Work Motivation, Job Satisfaction, Lecturer Performance

The development of the increasingly rapid issue of globalization can be seen from progress in various fields, both concerning economic, social and cultural fields, as well as other fields of knowledge. Communities are required to be able to face the challenges of globalization by increasing the competitive advantage each has. Higher Education is one of the efforts to develop human resources to improve quality and competence.

Higher Education has a standard in the implementation of its activities, namely the National Education Standards (SNP) which consists of standard content, processes, competency of graduates, education personnel, facilities and infrastructure, management, financing and assessment of education that must be planned and periodically improved. Increasing education staff can be done by improving the performance of educators (lecturers).

The improvement and development of this Lecturer Performance can be supported by the Work Environment side where the lecturers carry out their routine activities. Work Environment that is comfortable and conducive can increase the enthusiasm for work which will be seen in the Performance Lecturer. Forms of environmental influences that
provide contextual aspects encourage or facilitate the creation of performance. A performance boils down to the competence possessed, supported by the environment and the magnitude of the affection of the lecturers. Work Environment in Malang State Polytechnic can create a conducive and comfortable Work Environment for all lecturers to improve their performance. Improving this performance is in accordance with the opinion of Robbin (2003), that the Work Environment is everything that exists around the workers and which can influence in carrying out the tasks assigned.

Research result by Musriha (2011), shows that the Work Environment influences the performance of employees who roll cigarettes. Work Environment that is good for companies that focus on cleanliness, lighting, air circulation, and security can actually increase the focus of cigarette workers and will later improve the performance of the employees themselves. Malik, et al. (2011), also found the same results that employee performance was strongly influenced by Work Environment. The better the Work Environment in the workplace, the better the performance of its employees. The results of this study are in line with several studies, among others Cui, et al. (2013), Jayaweera (2015), and Nguyen, et al. (2015).

Work Motivation is an important factor that influences Lecturer Performance. Work Motivation in question is a mental impulse that arises from inside and outside the lecturer to carry out the task. This statement is in line with research from Trisnaningsih (2011), that Work Motivation has a significant effect on Accounting Performance Lecturers in private universities registered in the PTS Directory of Region VII of Kopertis in East Java Province in 2007, with S1, S2, S3 levels of education that have a minimum tenure of three years and not structural personnel, amounting to 1,161 lecturer. Research that is in line with this statement is research from Jon (2011), Musriha (2011), Sorasak (2014), Cui, et al. (2013), and Jayaweera (2015) that Work Motivation has a significant effect on Performance Lecturer.

The use of Job Satisfaction variable as mediation is done because basically Job Satisfaction can also be influenced by Work Environment. According to Kreitner (2014), Job Satisfaction has a strong positive relationship with performance. Anoraga (2006), argues that in human psychology, good Job Satisfaction will improve employee performance. Employees who have Job Satisfaction at work will be happy to carry out the work provided. This work will be easily understood and done so that it will improve one’s performance to the fullest. This statement is in line with the results of the study Sardzoska and Tang (2012), that the Work Environment affects the level of employee Job Satisfaction. According to Yunanda (2013), there is an important difference between the feeling of Job Satisfaction and two other elements of employee attitudes. Job Satisfaction is a relative feeling of pleasure or displeasure that is different from objective thinking and behavioral desires. These three attitudes help managers understand the employees’ reactions to their work and estimate their impact on future behavior. Empirically this statement is in line with empirical studies conducted by previous researchers, among others Barakat, et al. (2015), Jon (2011), and Musriha (2011). In this study, the results of the study showed that Job Satisfaction had a positive effect on performance.

Work Environment

Work Environment can be interpreted physical factors that exist around the work that can affect employees in carrying out the tasks assigned to them. Rivai (2006), states that the Work Environment is the whole facility and infrastructure that is around employees who are doing the work themselves. This Work Environment will include workplaces, work facilities, and tools, cleanliness, lighting, and tranquility. There are two types in the Work Environment inside Jain, et al. (2014), namely the physical work environment and non-physical work environment.

Work Motivation

Work Motivation is something that raises enthusiasm or encouragement to work. Work Motivation in the psychology of work is also called a driver of morale. The weak strength of Work Motivation of a workforce also determines the size of the
Effect of Work Environment on Lecturer Performance Mediated

David Mc. Clelland believes that employees have potential energy reserves. Energy will be utilized by employees because of encouragement by the motive strength and basic strength involved, the expectation of success, and the incentive value that is attached to the goal. There are three dimensions in Work Motivation according to Mc. Clelland in Robbin (2003), namely the need for achievement, the need for affiliation, and the need for power.

Job Satisfaction

Job Satisfaction is a person’s emotional state that can be seen through behavior, and that is either pleasant or unpleasant towards the work they are doing. This statement is in line with Kreitner, et al. (2014), opinion that Job Satisfaction is an affective or emotional response to various aspects of one’s work. There are four dimensions in Job Satisfaction that refer to the Luthans (2005) theory in Saha et al. (2015) namely salary, the job itself, supervision, and feedback on assignments.

Lecturer Performance

The success of educational institutions can be viewed concerning the Performance Lecturer itself. According to Trisnaningsih (2011), Performance Lecturer is the ability to carry out work or tasks that the lecturer has in completing a job. Performance or performance can be interpreted as a presentation of work, implementation of work, achievement of work, work results or performance. Measurement of Lecturer Performance refers to the Tridharma of Higher Education in Wijatno (2009), namely implementing education and teaching, carrying out research and writing scientific papers, and carrying out community service.

METHOD

This study uses a quantitative method with an explanatory study approach. The population of this study was all Malang State Polytechnic lecturers with the status of Civil Servants (PNS) who had guided and tested students, both thesis and street vendors, and had a minimum of 2 years working period of 314 people. All members of the population are sampled so that the research is a census. Of the 314 questionnaires distributed, the questionnaires returned 256 questionnaires. Scoring the answers to the questionnaire using 5 Likert scales, with data analysis methods using PLS 3 Professional and Sobel test to test mediation variables.

RESULTS

Validity and Reliability

The results of the convergent validity test can be seen in the table below.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Test Results for Convergent Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Indicator</td>
</tr>
<tr>
<td>Work Environment (X)</td>
<td>X₁</td>
</tr>
<tr>
<td></td>
<td>X₂</td>
</tr>
<tr>
<td>Employee Performance (Y)</td>
<td>Y₁</td>
</tr>
<tr>
<td></td>
<td>Y₂</td>
</tr>
<tr>
<td></td>
<td>Y₃</td>
</tr>
<tr>
<td>Work Motivation (Z₁)</td>
<td>Z₁₁</td>
</tr>
<tr>
<td></td>
<td>Z₁₂</td>
</tr>
<tr>
<td></td>
<td>Z₁₃</td>
</tr>
<tr>
<td>Job Satisfaction (Z₂)</td>
<td>Z₂₁</td>
</tr>
<tr>
<td></td>
<td>Z₂₂</td>
</tr>
<tr>
<td></td>
<td>Z₂₃</td>
</tr>
<tr>
<td></td>
<td>Z₂₄</td>
</tr>
</tbody>
</table>
The results of the reliability test of the research variables can be seen in the table below.

**Table 2  Variable Reliability Test Results**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach Alpha</th>
<th>Composite Reliability</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Environment</td>
<td>0.638</td>
<td>0.845</td>
<td>Reliable</td>
</tr>
<tr>
<td>Work Motivation</td>
<td>0.779</td>
<td>0.870</td>
<td>Reliable</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>0.849</td>
<td>0.898</td>
<td>Reliable</td>
</tr>
<tr>
<td>Lecturer Performance</td>
<td>0.718</td>
<td>0.840</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

The results of the research hypothesis testing can be seen from the following tables and figures.

**Table 3  Path Analysis and Hypothesis Testing**

<table>
<thead>
<tr>
<th>Influence</th>
<th>Coefficient</th>
<th>t-count</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Environment → Lecturer Performance</td>
<td>0.624</td>
<td>22.948</td>
<td>Significant</td>
</tr>
<tr>
<td>Work Environment → Work Motivation</td>
<td>0.446</td>
<td>8.088</td>
<td>Significant</td>
</tr>
<tr>
<td>Work Motivation → Lecturer Performance</td>
<td>0.331</td>
<td>5.836</td>
<td>Significant</td>
</tr>
<tr>
<td>Work Environment → Job Satisfaction</td>
<td>0.618</td>
<td>18.751</td>
<td>Significant</td>
</tr>
<tr>
<td>Job Satisfaction → Lecturer Performance</td>
<td>-0.107</td>
<td>1.396</td>
<td>Not significant</td>
</tr>
<tr>
<td>Work Environment → Work Motivation → Lecturer Performance</td>
<td>0.000</td>
<td>4.721</td>
<td>Significant</td>
</tr>
<tr>
<td>Work Environment → Job Satisfaction → Lecturer Performance</td>
<td>0.160</td>
<td>-1.403</td>
<td>Not significant</td>
</tr>
</tbody>
</table>

The results obtained in decision-making for testing the hypothesis in this study is to use the t-test, where the t-count value greater than the t-table value of 1.960 shows a significant effect.

![Figure 1 Research Result Path Diagram](image-url)
The results in Table 1 point 1 indicate that the t-count value is greater than t-table (22.948 > 1.96). This means that the Work Environment has a significant effect on Performance Lecturer. Point 2 in Table 1 shows that the t-count value is greater than the t-table value (8.088 > 1.96). This means that the Work Environment has a significant effect on Work Motivation. Next, the results in point 3 indicate that the t-value is greater than t-table (5.836 > 1.96). This means that the Work Environment has a significant effect on Job Satisfaction. Next, the results in point 4 indicate that the t-count value is greater than t-table (18.751 > 1.96). This means that the Work Environment has a significant effect on Job Satisfaction.

DISCUSSION
Effect of Work Environment on Performance Lecturers

The results of hypothesis testing on the influence of Work Environment on the Performance Lecturer found that Work Environment in the lecturers’ workplaces is currently influential in improving the Performance Lecturer at Malang State Polytechnic. Work Environment non-physical indicator values, especially on work relations items between lecturers and superiors, have the highest value compared to physical Work Environment indicator values. This shows that non-physical Work Environment such as relations with fellow lecturers and good superiors will also have a good impact on the Performance Lecturer at Malang State Polytechnic. Previous research in line with the results of this finding was carried out by several studies by Cui, et al. (2013), Jayaweera (2015), Malik, et al. (2011), dan Nguyen, et al. (2015), proving that having a good Work Environment both physically and non-physically will have an effect on improving performance.

Effect of Work Environment on Work Motivation

Based on the results of the analysis show that the Work Environment affects improving Work Motivation of the lecturers. Work Environment that is safe, comfortable and conducive will increase a person’s enthusiasm and enthusiasm so that the work that becomes his job can be resolved properly and on time as expected. Likewise, vice versa, Work Environment that is not safe, uncomfortable, dirty, noisy and the relationship of coworkers who are not good will make someone feel bored, lazy and not at home in the workplace, so that the jobs that become their duties are neglected and not resolved properly. This finding is in accordance with Khoiri’s (2013), research that Work Environment is good, such as adequate facilities, adequate lighting, cleanliness that is maintained, calm, and the existence of good working relationships with colleagues and superiors will make someone feel comfortable in working so motivating always to complete the task.

Effect of Work Motivation on Performance Lecturers

The results of the study indicate that Work Motivation is currently influential in increasing the Lecturer Performance of Malang State Polytechnic. The lecturers at the Malang State Polytechnic felt that the institutions they worked for could be said to be good in appreciating the results of work with challenges that had a positive impact on the work of the lecturers. Institutions are also considered to be able to provide flexibility to lecturers in developing ideas during carrying out their duties while working. Work Motivation is a requirement that encourages someone to do something toward a particular goal, and in the work psychology of Work Motivation, it is also called a driver of work morale. This encouragement for work can help improve performance. This finding is in accordance with the research Djoemadi (2014), Jon (2011), Juliningrum.
Win Narasuci, Margono Setiawan, Noermijati (2011), Sorasak (2014), dan Trisnaningsih (2011), which shows that Work Motivation has a significant effect on Performance Lecturer. This finding is different from the results of the study by Noermijati (2015), who found that Work Motivation did not affect employee performance.

**Effect of Work Environment on Job Satisfaction**

The next test results found that Work Environment has an important role in increasing Job Satisfaction. The results of the show that the indicator value of the work itself has the highest average value when compared to other indicators because the lecturers feel that the work is done are in accordance with the expertise of each. The work carried out by the State Polytechnic lecturers of Malang, which is teaching and guiding the students, was in accordance with what they expected, so that Job Satisfaction which the lecturers of Malang State Polytechnic improved. The results of this study are in line with several previous studies conducted by AbuAlRub, et al. (2016), Jain, et al. (2014), Raziq and Maulabakhsh (2015), dan Sardzoska and Tang (2012), which shows that physical Work Environment and non-physical Work Environment affect Job Satisfaction of lecturers.

**Effect of Job Satisfaction on Performance Lecturers**

Furthermore, the results of testing the hypothesis about the effect of Job Satisfaction on the Performance Lecturer found that Job Satisfaction obtained at the workplace did not affect improving the Malang State Polytechnic Lecturer Performance as it should. Changes in the value of salaries, the work itself, supervision, and feedback on assignments are not followed by changes in values on indicators of Malang State Polytechnic Lecturer Performance have not been able to provide feedback on the tasks that have been done by the lecturers. Job Satisfaction that arises because the lecturers feel that the work is done in accordance with the expertise possessed by each individual, in fact, has not been able to improve the Lecturer Performance concerning research and writing scientific papers and community service. This finding is in accordance with the research Sawitri, et al. (2010), Fu and Deshpande (2014), and Kuswandi, et al. (2015), prove that Job Satisfaction has no significant effect on Performance Lecturer. While the results of the study do not support the research conducted by Barakat, et al. (2015), Jon (2011), Musriha (2011), and Noermijati (2008), which states that Job Satisfaction has a strong direct or indirect relationship to employee performance in an organization.

**Effect of Work Environment on Performance Lecturers with Mediation Work Motivation**

Next, the test results found that Work Environment plays an important role in improving Performance Lecturers through Work Motivation. These results indicate that through Work Motivation, the Work Environment situation where the lecturers spur the lecturers to work. This statement is supported by research Cui, et al. (2013) that the condition of Work Environment affects the enthusiasm (motivation) of the work of the workers which in turn will affect the speed or slowness of performance. Institutions as best as possible to create a conducive Work Environment, build good relationships with fellow lecturers and superiors, then the institution also creates Work Motivation that is suitable with the lecturers through meeting the needs for achievement, power, and affiliation. The Lecturer Performance will automatically increase if the Work Environment is physical or non-physical and the Work Motivation of the lecturers is felt to be quite in accordance with what the lecturers expect.

**Effect of Work Environment on Performance Lecturers with Mediation Job Satisfaction**

The results of the analysis found that Work Environment did not have a significant influence on the increase in Malang State Polytechnic Lecturer Performance through Job Satisfaction as it should. These results indicate that Job Satisfaction and Work Environment conditions where lecturers cannot increase lecturers to work. The results of this study do not support the research conducted by Yunanda (2013), that the Work Environment has a direct or indirect influence on performance through Job Sat-
Effect of Work Environment on Lecturer Performance Mediated

satisfaction. Institutions, as well as possible, create a conducive Work Environment, build good relations with fellow lecturers and superiors, then the institution also seeks Job Satisfaction for lecturers by providing appropriate salaries, providing jobs according to their fields, providing feedback on tasks that have been carried out, in fact, this is not able to improve Malang State Polytechnic Lecturer Performance. Improvement of Lecturer Performance does not appear even though the institution itself is considered capable of providing a decent and comfortable Work Environment and can provide Job Satisfaction for Malang State Polytechnic lecturers. Some of these factors are due to the previous Job Satisfaction not affect increasing the Performance Lecturer in the previous hypothesis. The factor of the lack of appreciation of the institution on the duties of lecturers which is only done several times a year is what makes the results of this study insignificant.

LIMITATIONS
This study has obstacles at the time of the study, namely; the lack of maximum questionnaire distribution is due to the fact that while conducting research at the Malang State Polytechnic, several departments are still busy conducting accreditation in their respective departments. The busyness in accrediting this department resulted in many lecturers not participating in this study, so the questionnaire return rate could not be 100%. The rate of return of the questionnaire in this study was 81.5%.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion
In this study, it was found that Work Environment physically and good working relationships between co-workers and good superiors can improve Lecturer Performance both directly and indirectly through Work Motivation. A good Work Environment will encourage Work Motivation for lecturers to work. Work Motivation can encourage Performance Lecturers. This is because achieving performance requires motivation to achieve achievement, carrying out tasks with responsibilities, and always working with colleagues to be the things that can support the achievement of the desired Lecturer Performance. Meeting the need for adequate lighting and ventilation, the appropriate room temperature, and safe workspace security can enhance Job Satisfaction for lecturers. It can be concluded that the existing Work Environment can encourage the increase in the Job Satisfaction of the lecturers while working. Periodic salary increases, suitability of tasks with mastered expertise, and openness in the learning process, in fact, do not improve Lecturer Performance. This means that the increase in Job Satisfaction felt by lecturers is actually not in line with the increase in Performance Lecturers as they should be. Job Satisfaction (salary, work itself, supervision, and feedback on assignments) felt by the lecturers, in fact, does not have an impact on Work Environment and Performance Lecturer. It can be concluded that Job Satisfaction does not contribute to the influence of Work Environment on Malang State Polytechnic Lecturer Performance.

Recommendation
Malang State Polytechnic to pay more attention to the Work Environment starting from the cleanliness of lecturers’ workspaces, maintenance of facilities and infrastructure in lecturers’ workspaces on a regular basis. The implementation of Work Motivation improvement can be done with regular education seminars or workshops that need to be held frequently, so that motivated lecturers work and as a means of training and developing teaching and learning skills for the lecturers. Institutions can also improve Performance Lecturers through the appreciation of lecturers’ assignments, by giving awards for achievements and tasks that have been done and giving lecturers the flexibility to submit proposals in the learning process. Availability for supporting facilities and more access related to the writing and publishing of scientific works for lecturers to be more productive in the writing and publication of scientific papers each year. This study only examined four variables, namely Work Environment, Work Motivation, Job Satisfaction, and Lecturer Performance, while there are still many other variables that can be used in research related
to the field of Human Resource Management. The need for broadening the object of research, such as research on companies or organizations in the field of infrastructure and financial services.

REFERENCES
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