INTRODUCTION

Universitas Abulyatama (UNAYA) is one of the private universities in Aceh province, Indonesia that has produced a thousand graduates. UNAYA is one of the largest private universities in the region. Founded by Rusli Bintang under the Abulyatama Foundation, today this universality has produced many graduates in various fields of science. The university strives to produce quality graduates and is one of the strategic vision of the university. In so doing, there is a need for continuous improvement of lecturers’ performance, in accordance with their competencies and the educational qualifications. The performance of lecturers at the UNAYA is the result of work in quality and quantity achieved by its lecturers under their assigned duties and responsibilities.

Factors that have caused the lack of achievement of lecturers’ performance following expectations are largely determined by competence. Low lecturer competencies have an impact on the quality of graduates produced by the UNAYA. In addition to lecturer competency, one of the factors that give an influence on improving lecturer performance is a matter of leadership, in this case, the UNAYA rectorship along with the supervisor of each program such as the Head of the department. Leadership is one of the important factors that have a significant influence on the performance of lecturers. The success of an organization cannot be separated from the role of a leader in directing his subordinates, in this case, the lecturers to carry out their tasks well, the quality of graduates who become the main objectives can be achieved.

The other factors aside from competence and leadership that contribute to the lecturers’ performance and student achievement are the work environment. The work environment has an impact on improving the performance of lecturers and also has an impact on the quality of UNAYA graduates. The work environment is believed to have a direct influence on improving...
lecturer performance and the impact on the quality of graduates produced.

Studies on the factors affecting employee performance of public organizations have been studied by many scholars before. For example, previous studies by Rafie et al. (2010), Vathanophas (2007), and Sarmawa et al. (2015) documented that competence affected the performance of employees. Febiningtyas and Ekaningtias (2014) found leadership contributed towards performance improvement, while Qureshi et al. (2013) found work environment negatively affected labor turnover intention. Unlike these studies, Dantes and Sudiana (2013) investigated the role of the lecturer's level of competence in improving the learning and teaching process as well as student achievements.

These previous studies only examined the direct influence of competence, leadership, and work environment on employee performance of public organizations, and none of them have explored the direct effect of competence, leadership, and work environment on lecturers’ performance and graduates' quality of the university. To our knowledge, there have been no previous studies that have explored the indirect effect of competence, leadership, and work environment on graduates' quality through the improvement of the lecturer's performance of the private university in Indonesia.

Motivated to fill the existing gaps of previous studies, this study aims to examine and analyze the direct influence of competence, leadership, and work environment on the performance of lecturer and quality of graduates at the UNAYA Aceh, Indonesia. It also attempts to examine and analyze the indirect influence of competence, leadership, and work environment on the quality of graduates through the improvement of the performance of lecturers at the UNAYA Aceh, Indonesia.

The findings of this study are hoped to be beneficial for the private university management to be used as a reference to improve the quality of graduates based on the improvement of lecturers’ competency, leadership, and work environment through enhancement of lecturers' performance.

The next sections of this study are structured as follows. Section 3 provides the research method and data, followed by the discussion of the findings in Section 4. Finally, Section 5 concludes the study.

**LITERATURE REVIEW**

**Quality of graduates**

Quality is a process or quality product that is in accordance with predetermined goals. In the context of tertiary education, the quality of graduates means that the products of the teaching and learning process are known as graduates who are in accordance with the predetermined goals or objectives, those who understand the knowledge taught following the job market requirements where they will find work as the next stage of the completion of education conducted (Karsidi, 2001). The more graduates of educational institutions absorbed by the workforce, it can be said that the quality of graduates is in accordance with the goals of education in the college. This definition is in line with the study by Waldman (2012) and Supranta (2013), who believed that what is done by service providers, must be in accordance with what is expected by the service buyers, namely students and their parents.

**Lecturer performance**

There is no general and comprehensive theory about employee performance. Organizational effectiveness in managing, developing, and stimulating lecturers to carry out their duties wholeheartedly is an important foundation for organizational performance. Therefore, the management of human resources implemented at a university like UNAYA has a significant impact on improving the performance of the lecturers (Safrizal and Syafruddin, 2014).

Performance can be traced back to the behavior of people at work. Employees in this case the lecturers work in a certain way or behave in their ways, each contributing to the achievement of the organization’s goal of producing qualified graduates. Employee behavior concerning organizational performance can manifest itself in three different ways, namely: the action, process or the way he does his job, the execution of tasks assigned to him and expectations of achievement of the work that he has done (Mangkunegara, 2006; Ningrum, 2014).

**Competence**

According to the regulation of the Ministry of Research and Technology and Higher Education of the Republic of Indonesia, Permenristekdikti No. 100 of 2016, competence is interpreted as: 1) skills, abilities, competencies; and 2) authority. Some researchers defined “competence” as a combination of knowledge that contributes to the success of teaching and learning such as practical and theoretical knowledge, cognitive. For example, “management competency” can include thinking of emotional intelligence, and skills in negotiation. The study of competencies shows that competence includes very complex and broad concepts, and different scientists have different competency definitions. These definitions imply disagreement among scientists about certain definitions (Marlina et al., 2018; Haryiyonoto et al., 2019) Lecturers are required to master and possess pedagogical, professional, personal, and social competencies and lecturer competencies determine the quality of the three pillars (Triharmo) of Higher Education, namely: 1) teaching and learning; 2) research and publication; and 3) community services.
Leadership
According to Sutikno (2014), leadership is a field of research and practical skills that includes the ability of individuals or organizations to "lead" or "guide" individuals, teams, or all other organizations. The U.S. academic environment defines leadership as "a process of social influence in which a person can ask for help and support from others in completing joint tasks. According to Hanna and Firnanti (2013) and Hajar et al. (2018), leadership studies have produced useful theories in building emotional intelligence.

Leadership effectiveness is the ability of the leader to understand the current and future challenges and adjust them for the benefits of the organization. An effective leadership should manage the organization in the best way in all aspects of management, including planning, organizing, briefing, and supervision. Thus, a successful leadership could adjust his attitude and behavior with the current situation (Majid et al., 2016; Wani et al., 2018; Musnadi and Majid, 2019; Hanafi et al., 2019).

Work environment
The term work environment is used to describe the conditions around it where an employee operates. The work environment can consist of physical conditions, such as office temperature, or equipment, such as laptops or computers. Sariyathi (2011) sets the work environment including how the involvement of an employee in the social interaction he built in the workplace with his colleagues or superiors.

In general, employees are entitled to a work environment that is free from harassment. A non-conducive work environment exists when unwelcome sexual behavior interferes with the work performance of employees, or creates a hostile, intimidating or offensive work environment (Miftah, 2012; Wani et al., 2018; Musnadi and Majid, 2019). The term work environment can also be associated with the physical condition of the building. A healthy work environment will be free from problems associated with sick building syndromes, which are often caused by poor ventilation or the release of chemicals used during construction. Accumulation of fungi and fungi can also cause sick building syndromes.

Based on the above delineation, the study proposed the following research model to be estimated, as illustrated in Figure 1.

![Figure 1: Proposed research model](image-url)

Referring to Figure 1, the following hypotheses would be tested in the study:
2. Leadership influences the performance of lecturers at the UNAYA, Aceh, Indonesia.
3. The work environment influences the performance of lecturers at the UNAYA, Aceh, Indonesia.
5. Leadership influences the quality of graduates at the UNAYA, Aceh, Indonesia.
6. The work environment affects the quality of graduates at the UNAYA, Aceh, Indonesia.
7. Lecturer performance influences the quality of graduates at the UNAYA, Aceh, Indonesia.
8. Competence affects the quality of graduates through the performance of lecturers at the UNAYA, Aceh, Indonesia.
9. Leadership influences the quality of graduates through the performance of lecturers at the UNAYA, Aceh, Indonesia.
10. The work environment influences the quality of graduates the performance of lecturers at the UNAYA, Aceh, Indonesia.

**RESEARCH METHODS**

**Respondents of the study**
The location of this research is at the UNAYA, Central Aceh, Indonesia. The object of this research is related to what and how the influences of competency, leadership, work environment, lecturers’ performance and graduates’ quality of the university.
The research population is also known as a collection of individuals or objects known to have similar characteristics. All individuals or objects in a particular population usually have the same properties or traits and are binding (Hasan, 2012). In this study, the intended population is all lecturers of UNAYA totaling 236 people. All lecturers of the university were selected as the sampling of the study, thus using census techniques for sample selection.

**Estimation method**

In this study, the data is analyzed using the Structural Equation Modeling (SEM) of statistical software package AMOS 22.0 for hypothesis testing. The SEM equation model is a set of statistical techniques that allows the testing of a series of “complex” relationships simultaneously. Testing this hypothesis is to analyze the value of the Critical Ratio (CR) and probability value (p-value) of the data if compared to the required statistical limitation, which is above 1.96 for CR value and below 0.05 for p-value. If the results of the data show the value that meets the requirements, then the proposed research hypothesis can be accepted.

**RESULTS AND DISCUSSION**

**Measurement model test**

Figure 2 illustrates the estimated loading factors of all 27 indicators in the model. All indicators were found to have their loading values of greater than 0.50, signifying that all indicators could be used for predicting interactions among the investigated variables.

Having ensured all the indicators could properly measure the variables, the study proceeds to the next step, namely testing the goodness of fits of the proposed model. The findings of the goodness of fit indices are reported in Table 1. The table showed that, except for the Parsimony Adjusted Measures that recorded a good fit, all other indices showed the best fit of the model. Overall, our findings showed the goodness of fit of the estimated model in the study.

**Table 2: The Goodness of Fit Measurement Models**

<table>
<thead>
<tr>
<th>The goodness of Fit Index</th>
<th>Cut-off Value</th>
<th>Finding</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIN</td>
<td>CMIN/DF &lt;2</td>
<td>1.764</td>
<td>Best fit</td>
</tr>
<tr>
<td>Baseline Comparisons</td>
<td>Approaching 1</td>
<td>&gt; 0.5</td>
<td>Best fit</td>
</tr>
<tr>
<td>Parsimony Adjusted Measures</td>
<td>0 – 1</td>
<td>0 - 1</td>
<td>Good fit</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.05 – 0.08</td>
<td>0.057</td>
<td>Best fit</td>
</tr>
<tr>
<td>AIC</td>
<td>Default Model is between Saturated and Independence estimates</td>
<td>1837&gt;783&gt;700</td>
<td>Best fit</td>
</tr>
<tr>
<td>ECVI</td>
<td>Default Model is between Saturated and Independence estimates</td>
<td>6,931&gt;7,758&gt;17,854</td>
<td>Best fit</td>
</tr>
</tbody>
</table>

**Direct effects of competence, leadership, and work environment on lecturers’ performance and graduates’ quality**

The main findings of the SEM estimation are reported in Table 3. Referring to the table, the study found that competence, leadership, and work environment have positive direct significant effects on the lecturers’ performance at the 1% level of significance. In terms of the magnitude of the effect, competence is recorded to have the greatest effect on the performance of lecturers (0.278), followed by the leadership (0.195), and work environment (0.119). Particularly, this indicates that an increase in competence of lecturers, leadership, and work environment would lead to an increase in the performance of lecturers.
environment by a 1 unit in the Likert scale, the performance of the lecturers would be increased by 0.278, 0.195, 0.119 units on the Likert scale, respectively.

Table 3: Findings of Estimated SEM

<table>
<thead>
<tr>
<th>Variable</th>
<th>Variable</th>
<th>Estimate</th>
<th>Standard error</th>
<th>Critical ratio</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lec &lt;--- Comp</td>
<td>0.278</td>
<td>0.084</td>
<td>30.562</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Lec &lt;--- Lead</td>
<td>0.195</td>
<td>0.069</td>
<td>20.711</td>
<td>0.007</td>
<td></td>
</tr>
<tr>
<td>Lec &lt;--- Env</td>
<td>0.119</td>
<td>0.037</td>
<td>30.664</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Grad &lt;--- Comp</td>
<td>0.055</td>
<td>0.052</td>
<td>0.729</td>
<td>0.466</td>
<td></td>
</tr>
<tr>
<td>Grad &lt;--- Lead</td>
<td>0.226</td>
<td>0.038</td>
<td>30.665</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Grad &lt;--- Env</td>
<td>0.370</td>
<td>0.051</td>
<td>50.474</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Grad &lt;--- Lec</td>
<td>0.279</td>
<td>0.045</td>
<td>30.235</td>
<td>0.001</td>
<td></td>
</tr>
</tbody>
</table>

Note: Lec = Lecturers’ performance; Grad = Graduate quality; Comp = Competence; Lead = Leadership; and Env = Work environment.

These findings are in line with previous studies. For example, previous studies by Rafie et al. (2010), Vathanophas (2007), Shahzad et al. (2012), Raharjo (2014), and Sarmawa et al. (2015) documented that competence affected the performance of employees. Febiningtyas and Ekaningtias (2014) found leadership contributed towards performance improvement, while Qureshi et al. (2013) found work environment negatively affected labor turnover intention.

Next, the study found that, except for the competency of lecturers that has an insignificant effect on the graduate quality, leadership and work environment were documented to have positive direct significant effects on the quality of graduates at the 1% level of significance. Overall, the work environment is found to have the greatest effect on the quality of graduates by 0.370, followed by the leadership (0.226). Based on the testing of the structural model, the variable that has the greatest influence is the work environment which has a coefficient number of 0.37. Specifically, this indicates that an increase in leadership and work environment by a 1 unit on the Likert scale, the quality of graduates would increase by 0.370 and 0.226 units on the Likert scale, respectively. These findings implied that any effort to improve graduate quality, the focus should be given on improving leadership commitment and support as well as the academic atmosphere.

As a direct effect, the study also found that the performance of lecturers has a positive significant effect on the graduate quality at the 1% level of significance. An increase in lecturer performance by a 1 unit on the Likert scale, it led to an increase in the graduate quality by 0.279 units at the Likert scale. This could be done by improving both the hard- and soft-skills of lecturers in teaching and learning, research and publication, and community services. Creating a proper academic atmosphere by equipping all academic facilities such as laboratories, classrooms, libraries, and sports centers based on technology advancement.

An indirect effect of lecturers’ performance on the influences of competence, leadership, and work environment on graduates’ quality

Table 4 reports the findings of the indirect effect of lecturers’ performance on the influences of competence, leadership, and work environment on graduates’ quality. As observed from the table, lecturers’ performance was recorded to significantly and positively mediate the influences of competence, leadership, and work environment on graduates’ quality. These findings showed that, except for the competency of the lecturers that functioned as the full mediating variable, leadership and work environment functioned as the partially mediated variables.

Table 4: Findings of Estimated SEM

<table>
<thead>
<tr>
<th>Variable interaction</th>
<th>Estimate</th>
<th>Sobel test</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grad &lt;--- Lec &lt;--- Comp</td>
<td>0.278 x 0.279 = 0.078</td>
<td>0.284</td>
<td>0.012</td>
</tr>
<tr>
<td>Grad &lt;--- Lec &lt;--- Lead</td>
<td>0.195 x 0.279 = 0.054</td>
<td>0.269</td>
<td>0.037</td>
</tr>
<tr>
<td>Grad &lt;--- Lec &lt;--- Env</td>
<td>0.119 x 0.279 = 0.033</td>
<td>0.237</td>
<td>0.023</td>
</tr>
</tbody>
</table>

Note: Lec = Lecturers’ performance; Grad = Graduate quality; Comp = Competence; Lead = Leadership; and Env = Work environment.

These concluding pieces of evidence are simply due to the insignificant direct effect of competency of lecturers on the quality of graduates of UNAYA, Aceh, Indonesia. Its effect is only found to be
significant indirectly through the improvement of lecturers’ performance. Meanwhile, the competence, leadership, and work environment have affected directly and significantly the graduates’ quality and indirectly through the improvement of lecturers’ performance.

These findings suggested that any effort to enhance graduate quality, it should be focused on improving lecturers’ performance through the enhancements of their competencies, improvement of leadership management, and the promotion of quality of academic atmospheres.

**CONCLUSIONS**

This study has examined and analyzed the effects of competence, leadership, and work environment on lecturers’ performance and their implications to the quality of graduates of Universitas Abulyatama (UNAYA) in Aceh, Indonesia. 236 lecturers of UNAYA have been selected as the sample of the study using the stratified random sampling method. Using the Structural Equation Modeling (SEM) approach, the study found that, with the exception of competence, all other exogenous variables (i.e., leadership and environment) significantly affected the lecturers’ performance and the quality of graduates. In addition, the study also documented that lecturers’ performances significantly mediated the effects of competence, leadership, and work environment on the quality of graduates of Universitas Abulyatama (UNAYA) in Aceh, Indonesia. These findings suggest that to further improve the quality of graduates, the university management should focus on the improvement of lecturers’ competence, leadership, and university educational atmospheres.

In addition, the competency of lecturers and work environment were, respectively, recorded to have the greatest influence on the lecturers’ performance and quality of graduates of the UNAYA Aceh, Indonesia. Therefore, if the lecturers’ performance becomes the main concern for improvement, it must be done through improving the hard- and soft-skills of lecturers in teaching and learning process, research and publication, and community services activities. Similarly, if the quality of graduates becomes the main concern for improvement, it must be done through improving the work environment by creating conducive academic atmospheres on campus.

**REFERENCES**


